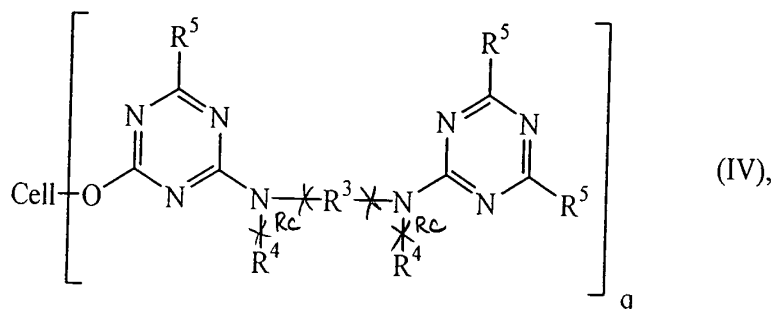
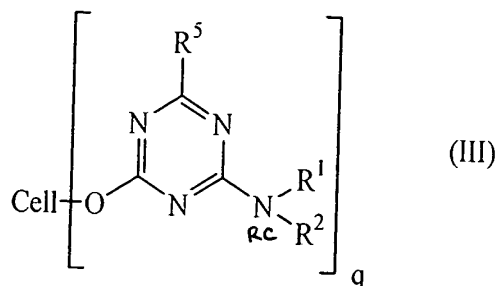


# IN THE CLAIMS:

Please amend claim 9 as follows:

9. (Amended) Cellulose fibers finished in a permanently flameproof manner and articles containing these cellulose fibers, characterized by amino-s-triazine compounds bound to glucose units of the cellulose via ether bridges and by the structure of formula III or IV:



wherein:

$\text{R}^1$  and  $\text{R}^2$  are the same or different and are selected from the group consisting of: H; ( $\text{C}_1 - \text{C}_6$ ) alkyl; benzyl; phenyl;  $\omega$ -amino ( $\text{C}_2 - \text{C}_6$ ) alkyl;  $\omega$ -hydroxy ( $\text{C}_2 - \text{C}_6$ ) alkyl;  $-(\text{CH}_2)_m\text{SO}_2\text{OH}$  and  $-(\text{CH}_2)_m\text{COOH}$ , in which m is 1 or 2, as well as their amides;  $-(\text{CH}_2)_n\text{P}(\text{O})(\text{OR}')_2$  with n = 1, 2 or 3 and  $\text{R}' = \text{H}$ ,  $\text{CH}_3$ , or  $\text{C}_2\text{H}_5$ ; o-, m- or p- $\text{C}_6\text{H}_4\text{SO}_2\text{NH}_2$ ; and o-, m- or p- $\text{C}_6\text{H}_4\text{N}(\text{CH}_3)_3^+$ ; or  $\text{R}^1$  and  $\text{R}^2$  together form an ethylene-, trimethylene- or bismethylene imino group;

$\text{R}^3$  in formula IV is selected from the group consisting of: para- or meta-phenylene; 1,4-, 1,3- or 2,6-naphthylene; ( $\text{C}_2 - \text{C}_6$ ) alkylene;  $-\text{C}_2\text{H}_4\text{NH}-\text{C}_2\text{H}_4-$ ;  $\text{C}_2\text{H}_4\text{NH}-\text{C}_2\text{H}_4\text{NH}-\text{C}_2\text{H}_4-$ ;  $\text{C}_2\text{H}_4\text{O}-\text{C}_2\text{H}_4-$ ; and  $\text{C}_6\text{H}_4\text{NHCONH}-\text{C}_6\text{H}_4-$ ;

$\text{R}^4$  is selected from the group consisting of: H; ( $\text{C}_1 - \text{C}_3$ ) alkyl; aminoethyl; and aminopropyl; or both  $\text{R}^4$  groups together form ethylene or propylene;

$\text{R}^5$  in formulas III and IV is selected from the group consisting of: Cl; OH; Ocell in which cell is an anhydroglucose unit of cellulose; and  $\text{OR}^6$ , or  $\text{NHR}^6$  in which  $\text{R}^6$  stands for a dye group;

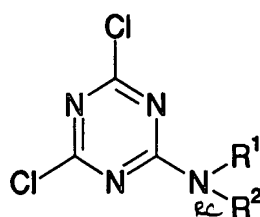
and wherein q is the average degree of substitution per glucose unit and is 1 to 3.

Please cancel claim 10 without prejudice or disclaimer.

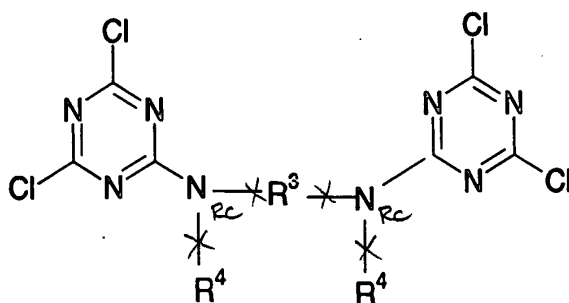
## II. REMARKS

*What is Claimed Is:*

1. A method for the permanent flameproof finishing of cellulose fibers and articles containing cellulose fibers, comprising treating said cellulose fibers or said articles containing cellulose fibers under alkaline conditions, during which a swelling of the fibers occurs, and then treating the swollen fibers so produced with a cyanuric chloride derivative in an aqueous-alkaline phase, wherein a 4,6-dichloro-1,3,5-triazine-2-yl amine of formula I or II is used as said cyanuric chloride derivative:



(I)



(II),

10

wherein:

- $R^1$  and  $R^2$  are the same or different and are selected from the group consisting of: H;  $(C_1 - C_6)$  alkyl; benzyl; phenyl;  $\omega$ -amino  $(C_2 - C_6)$  alkyl;  $\omega$ -hydroxy  $(C_2 - C_6)$  alkyl;  $-(CH_2)_mSO_2-OH$  or  $-(CH_2)_m-COOH$ , in which  $m$  is 1 or 2, as well as their amides;  $-(CH_2)_n-P(O)(OR')_2$  in which  $n = 1, 2$  or  $3$  and  $R' = H, CH_3$  or  $C_2H_5$ ; o-, m- or p- $C_6H_4-SO_2NH_2$ ; and o-, m- or p- $C_6H_4-N(CH_3)_3^+$ ; or  $R^1$  and  $R^2$  together form an ethylene-, trimethylene- or bismethylene imino group;

15

$R^3$  in formula II is selected from the group consisting of: para- or meta-phenylene; 1,4-, 1,3- or 2,6-naphthylene;  $(C_2 - C_6)$  alkylene;  $-C_2H_4-NH-C_2H_4-$ ;  $C_2H_4-NH-C_2H_4-NH-C_2H_4-$ ;  $C_2H_4-O-C_2H_4-$ ; and  $C_6H_4-NHCONH-C_6H_4-$ ;

5  $R^4$  is selected from the group consisting of: H;  $(C_1 - C_3)$  alkyl; aminoethyl; and aminopropyl; or both  $R^4$  groups together form ethylene or propylene.

2. The method according to claim 1, wherein said 4,6-dichloro-1,3,5-triazine-2-yl amine is selected from the group consisting of: 2-amino-4,6-dichlorotriazine; 2-aminoethylamino-2,4-dichlorotriazine; 2-(p-benzenesulfonamide-amino)-4,6-dichlorotriazine; a salt, especially a halogenide of 2-(p-trimethylammonium-benzene-amino)-4,6-dichlorotriazine; bis-N,N'-(4,6-dichloro-triazine-2-yl)-p-phenylene diamine; bis-N,N'-(4,6-dichlorotriazine-2-yl)- $(C_2$  to  $C_4)$  alkene diamine; and bis-(4,6-dichlorotriazine-2-yl)-aminoethylphosphonate.

15 3. The method according to either claim 1 or 2, characterized in that the cellulose fiber is a cotton or viscose fiber and that it is in the form of a flock, yarn, textile fabric or fleece.

20 4. The method according to either claim 1 or claim 2, wherein the 4,6-dichlorotriazinyl amine compound is used in an amount corresponding to 20 to 80% by wt. relative to the cellulose.

25 5. The method according to either claim 1 or claim 2, characterized in that at least one 4,6-dichlorotriazinyl amine compound is used in an amount corresponding to a nitrogen content of at least 2% by wt., relative to the finished cellulose.

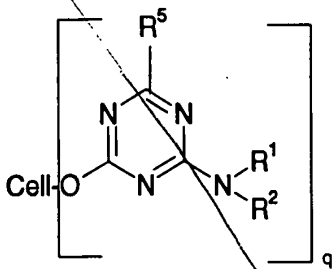
30 6. The method of claim 5, wherein said at least one 4,6-dichlorotriazinyl amine compound is used in an amount of 3 to 7% by wt. relative to the finished cellulose.

- 5

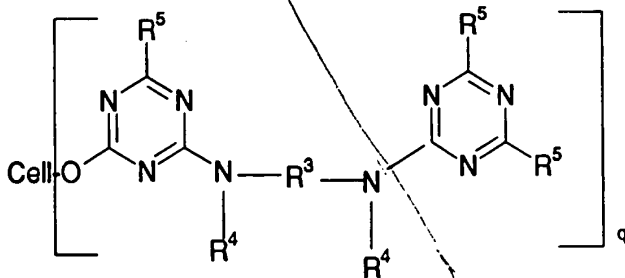
- 10

15

Cellulose fibers finished in a permanently flameproof manner and articles containing these cellulose fibers, characterized by amino-s-triazine compounds bound to glucose units of the cellulose via ether bridges and by the structure of formula III or IV:



(iii)



(IV),

wherein:

$R^1$  and  $R^2$  are the same or different and are selected from the group consisting of: H;  $(C_1 \text{ to } C_6)$  alkyl; benzyl; phenyl;  $\omega$ -amino  $(C_2 - C_6)$  alkyl;  $\omega$ -hydroxy  $(C_2 - C_6)$  alkyl;  $-(CH_2)_mSO_2-OH$  and  $-(CH_2)_m-COOH$ , in which  $m$  is 1 or 2, as well as their amides;  $-(CH_2)_n-P(O)(OR')_2$  with  $n = 1, 2$  or 3 and  $R' = H, CH_3$  or  $C_2H_5$ ; o-, m- or p- $C_6H_4-SO_2NH_2$ ; and o-, m- or p- $C_6H_4-N(CH_3)_3^+$ ; or  $R^1$  and  $R^2$  together an ethylene-, trimethylene- or bismethylene imino group;

$R^3$  in formula IV is selected from the group consisting of: para- or meta-phenylene; 1,4-, 1,3- or 2,6-naphthylene;  $(C_2 - C_6)$  alkylene;  $-C_2H_4-NH-C_2H_4-$ ;  $C_2H_4-NH-C_2H_4-NH-C_2H_4-$ ;  $C_2H_4-O-C_2H_4-$ ; and  $C_6H_4-NHCONH-C_6H_4-$

$R^4$  is selected from the group consisting of: H;  $(C_1 - C_3)$  alkyl; aminoethyl; and aminopropyl; or both  $R^4$  groups together form ethylene or propylene;

$R^5$  in formulas III and IV is selected from the group consisting of: Cl; OH; Ocell in which cell is an anhydroglucose unit of cellulose; and  $OR^6$ , or  $NHR^6$  in which  $R^6$  standing for a dye group;

and wherein  $q$  is the average degree of substitution per glucose unit.

10. The finished cellulose fibers of claim 9, wherein  $q$  is 1-3.

11. The finished cellulose fibers of claim 9, wherein said cellulose fibers are in an article selected from the group consisting of: yarn; a fleeces; and a sheet.

12. The finished cellulose fibers of claim 9, wherein said finished cellulose fibers have a nitrogen content of at least 1% by wt.

13. The finished cellulose fibers of claim 12, wherein said finished cellulose fibers have a nitrogen content of 2 to 7% by wt.



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FILE 'HCAPLUS' ENTERED AT 16:17:04 ON 07 NOV 2003  
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L5 0 SEA L3 AND L4  
L6 324599 SEA CELLULOS?  
L7 7 SEA (L3 OR L4) AND L6  
D L7 1-7 TI  
SEL L7 2 RN

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D L9 1-7 RN STR  
SEL L9 1,2,3,4,6 RN  
L10 5 SEA (13734-13-9/BI OR 155404-54-9/BI OR 396639-74-0/BI  
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E CELLULOSE/CN  
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HEMICELLULOLY? OR COTTON? OR RAYON? OR JUTE# OR HEMP# OR  
KAPOK# OR FLAX## OR LINEN#  
L16 1053149 SEA (FABRIC? OR TEXTILE? OR CLOTH? OR GARMENT? OR YARN?  
OR NAPER? OR DRAPER? OR (DRY OR RAG) (W)GOOD? OR WEAV? OR  
WOVE? OR WOOF? OR WEFT? OR WEB? OR SPIN? OR SPUN? OR  
APPAREL? OR SLUB? OR ROVING#)/BI,AB  
L17 1033903 SEA (FIBER? OR FIBR? OR FILAMENT? OR THREAD? OR STRAND?  
OR RIBBON? OR FILIFORM?)/BI,AB  
L18 3 SEA L12 AND L15  
L19 3 SEA L18 AND (L16 OR L17)

L20 37 SEA L13 AND L15  
L21 23 SEA L20 AND (L16 OR L17)  
L22 14 SEA L20 AND 40/SC,SX

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L24 SCR 2043  
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L27 8685 SEA SSS FUL (L2 NOT L25) NOT L24  
SAV L27 GRA619/A

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L29 979 SEA L28 AND L15  
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L31 562 SEA L29 AND L17  
L32 469 SEA L29 AND 40/SC,SX  
L33 160 SEA L30 AND L31 AND L32  
L34 463717 SEA L14 OR CELLULOS? OR HEMICELLULOS? OR CELLULOLY? OR  
HEMICELLULOLY? OR COTTON? OR VISCOSE# OR RAYON? OR JUTE#  
OR HEMP# OR KAPOK# OR FLAX## OR LINEN#  
L35 3 SEA L12 AND L34  
L36 3 SEA L35 AND (L16 OR L17 OR 40/SC,SX)  
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L38 0 SEA L37 NOT L20  
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L44 1 SEA L43 AND L29  
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L46 967159 SEA ?PHOSPHAT? OR (PHOSPHORUS# OR P) (2A) (CONTAIN? OR  
CONTG#)

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E FORMALDEHYDE/CN  
L48 1 SEA FORMALDEHYDE/CN

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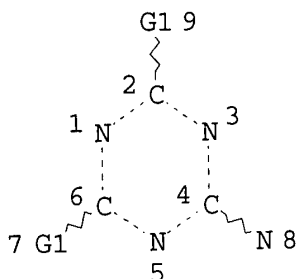
L49 370556 SEA L47 OR L48 OR UREA# OR FORMALDEHYDE# OR FORMYLIN# OR  
CH2O OR H2CO OR HCHO  
L50 4 SEA L33 AND (L45 OR L46)



L51 13 SEA L28 AND L15 AND L45  
 L52 13 SEA L51 AND (L16 OR L17 OR 40/SC,SX)  
 L53 12 SEA L51 AND (L16 OR 40/SC,SX)  
 L54 24 SEA L28 AND L15 AND L46  
 L55 16 SEA L54 AND (L16 OR L17 OR 40/SC,SX)  
 L56 13 SEA L33 AND L49  
 L57 9 SEA L28 AND L34 AND (L45 OR L46) AND L49  
 L58 8 SEA L57 AND (L16 OR L17 OR 40/SC,SX)  
 L59 13 SEA L19 OR L36 OR L44 OR L50 OR L58  
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 L61 10 SEA L21 NOT (L59 OR L60)  
 L62 13 SEA L20 NOT (L59 OR L60 OR L61)

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 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

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 L25 STR

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NODE ATTRIBUTES:  
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GRAPH ATTRIBUTES:

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8685 ANSWERS

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=> d 159 1-13 cbib abs hitstr hitind

L59 ANSWER 1 OF 13 HCA COPYRIGHT 2003 ACS on STN

138:171738 Dyeing of **cellulosic fiber** products with  
natural dyes. Mori, Masukazu (Japan). Jpn. Kokai Tokkyo Koho JP  
2003049372 A2 20030221, 7 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 2001-241573 20010809.

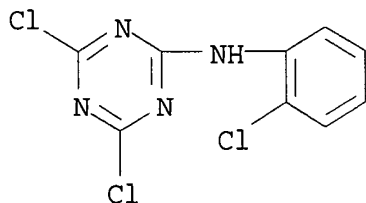
AB **Cellulosic fiber** products are treated with aq.  
solns. contg. 3-50% (based on 100% of the **fiber** products)  
alkalies at 50-110.degree. and then dyed with natural dyes using  
mordants. Thus, Manila **hemp yarns** were treated  
with an aq. soln. contg. Na3PO4 at 100.degree. for 10 min, treated  
with an aq. soln. contg. Fe2O3, and then dyed with logwood to give  
**yarns** showing navy blue color and good color fastness to  
light, washing, and friction.

IT 101-05-3, 2,4-Dichloro-6-(o-chloroanilino)-1,3,5-triazine  
2272-40-4 3533-55-9 4156-21-2,  
Sandospace R 30369-88-1 90850-60-5  
91869-46-4 91869-47-5

(anionization agent; alkali pretreatment for mordant-dyeing of  
**cellulosic fibers** with natural pigments)

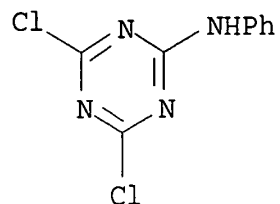
RN 101-05-3 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro-N-(2-chlorophenyl)- (9CI) (CA  
INDEX NAME)



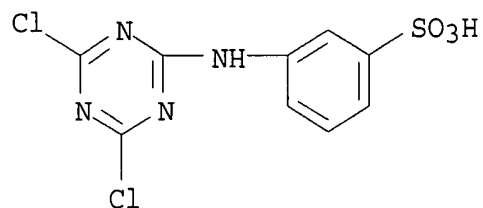
RN 2272-40-4 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro-N-phenyl- (9CI) (CA INDEX NAME)



RN 3533-55-9 HCA

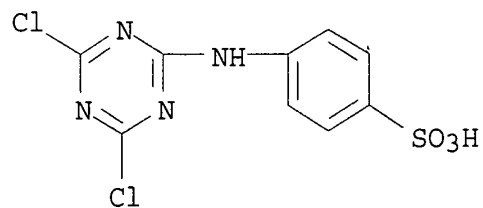
CN Benzenesulfonic acid, 3-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 4156-21-2 HCA

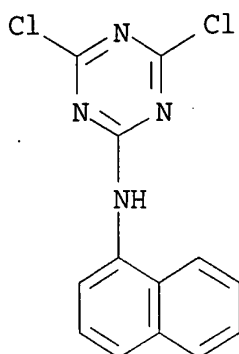
CN Benzenesulfonic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-, monosodium salt (9CI) (CA INDEX NAME)



● Na

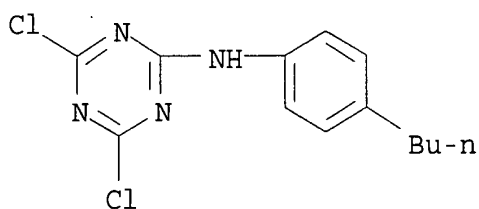
RN 30369-88-1 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro-N-1-naphthalenyl- (9CI) (CA INDEX NAME)



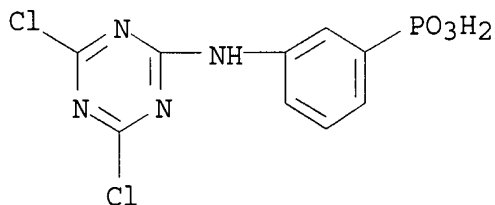
RN 90850-60-5 HCA

CN 1,3,5-Triazin-2-amine, N-(4-butylphenyl)-4,6-dichloro- (9CI) (CA INDEX NAME)



RN 91869-46-4 HCA

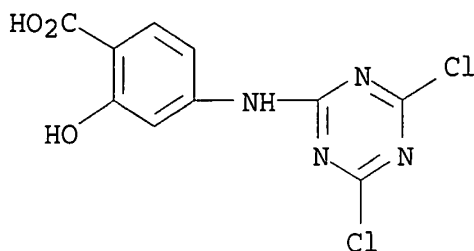
CN Phosphonic acid, [3-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]phenyl]-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 91869-47-5 HCA

CN Benzoic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-2-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



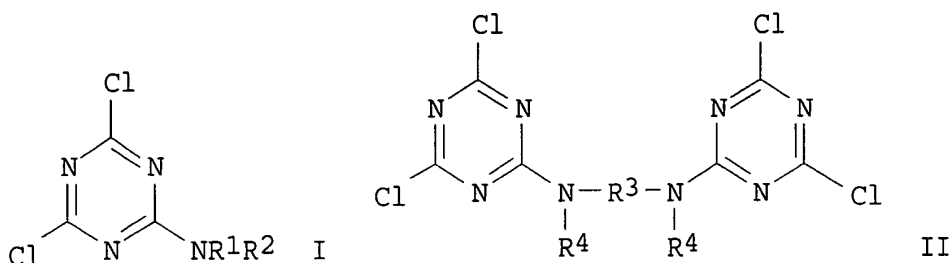
● Na

- IC ICM D06P001-34
- ICS D06P003-60; D06P005-00; D06P005-06
- CC 40-6 (Textiles and Fibers)
- ST **cellulosic fiber** dyeing mordant natural dye;  
logwood alkali mordant dyeing Manila **hemp**
- IT Creaseproofing  
(agents; alkali pretreatment for mordant-dyeing of  
**cellulosic fibers** with natural pigments)
- IT Ashes (residues)  
**Cotton fibers**  
Manila **hemp** (Musa textilis)  
Mordants  
**Ramie fibers**  
(alkali pretreatment for mordant-dyeing of **cellulosic fibers** with natural pigments)
- IT **Rayon**, uses  
(alkali pretreatment for mordant-dyeing of **cellulosic fibers** with natural pigments)
- IT Tannins  
(alkali pretreatment for mordant-dyeing of **cellulosic fibers** with natural pigments)
- IT Surfactants  
(cationic, cationization agents; alkali pretreatment for  
mordant-dyeing of **cellulosic fibers** with  
natural pigments)
- IT Quaternary ammonium compounds, uses  
(cationization agents; alkali pretreatment for mordant-dyeing of  
**cellulosic fibers** with natural pigments)
- IT **Fibers**  
(**cellulosic**; alkali pretreatment for mordant-dyeing of  
**cellulosic fibers** with natural pigments)
- IT Gardenia jasminoides  
(dye; alkali pretreatment for mordant-dyeing of  
**cellulosic fibers** with natural pigments)
- IT **Rayon**, uses  
(**fabrics**; alkali pretreatment for mordant-dyeing of

- cellulosic fibers** with natural pigments)
- IT Pyroligneous acids  
(iron salts; alkali pretreatment for mordant-dyeing of **cellulosic fibers** with natural pigments)
- IT Dyeing  
(mordant; alkali pretreatment for mordant-dyeing of **cellulosic fibers** with natural pigments)
- IT Dyes  
(natural; alkali pretreatment for mordant-dyeing of **cellulosic fibers** with natural dyes)
- IT 144-55-8, Sodium hydrogen carbonate, uses 298-14-6 497-19-8, Sodium carbonate, uses 584-08-7, Potassium carbonate 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses 1312-76-1, Potassium silicate 1344-09-8, Sodium silicate 7320-34-5, Potassium **pyrophosphate** 7558-79-4 7601-54-9, Trisodium **phosphate** 7722-88-5, Sodium **pyrophosphate** 7758-11-4 7778-53-2, Tripotassium **phosphate**  
(alkali pretreatment for mordant-dyeing of **cellulosic fibers** with natural pigments)
- IT 139-12-8, Aluminum acetate 1309-37-1, Ferric oxide, uses 1332-29-2, Tin oxide 1332-37-2, Iron oxide, uses 1344-28-1, Aluminum oxide, uses 1344-70-3, Copper oxide 7758-98-7, Copper sulfate, uses 10043-01-3, Aluminum sulfate 27876-94-4, Crocetin 60687-93-6, Lac dye 64294-91-3, Yellow ochre  
(alkali pretreatment for mordant-dyeing of **cellulosic fibers** with natural pigments)
- IT 101-05-3, 2,4-Dichloro-6-(o-chloroanilino)-1,3,5-triazine 101-37-1, Triallyl cyanurate 959-52-4 1025-15-6, Triallyl isocyanurate 2272-40-4 3533-55-9 4156-21-2, Sandospace R 6291-95-8, Trimethallyl isocyanurate 15791-08-9, 2,4-Dichloro-6-hydroxy-1,3,5-triazine 21614-17-5 27325-67-3 30369-88-1 90850-60-5 91869-46-4 91869-47-5 100273-54-9 101503-90-6 371774-99-1 371775-00-7 371775-01-8 371775-02-9  
(anionization agent; alkali pretreatment for mordant-dyeing of **cellulosic fibers** with natural pigments)
- IT 3033-77-0, Glycidyltrimethylammonium chloride 96550-06-0, Cationon UK  
(cationization agent; alkali pretreatment for mordant-dyeing of **cellulosic fibers** with natural pigments)
- IT 8005-33-2, Logwood  
(logwood; alkali pretreatment for mordant-dyeing of **cellulosic fibers** with natural pigments)

L59 ANSWER 2 OF 13 HCA COPYRIGHT 2003 ACS on STN  
136:168928 Procedure for the flameproof finishing of **cellulose fibers** and articles containing thereof and products flameproofed thereby. Gaehr, Frank; Criegee, Christian (Degussa A.-G., Germany). Ger. Offen. DE 10038100 A1 20020214, 10 pp. (German). CODEN: GWXXBX. APPLICATION: DE 2000-10038100 20000804.

GI



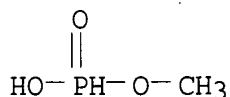
AB Fireproofing agents for **cellulose fiber**-contg. articles are based on triazines I ( $R_1, R_2 = H$  or org. group) or bistriazines II ( $R_3 = p$ - or  $m$ -phenylene; 1,4-, 1,3-, or 2,6-naphthylene; C2-6 alkylene;  $CH_2CH_2NHCH_2CH_2$ ,  $CH_2CH_2NHCH_2CH_2NHCH_2CH_2$ ,  $CH_2CH_2OCH_2CH_2$ , or  $C_6H_4NHCONHC_6H_4$ ;  $R_4 = H$ , C1-3 alkyl, aminoethyl, aminopropyl; or both  $R_3$ 's together =  $C_2H_4$  or  $C_3H_6$ ), optionally together with a **P-contg.** flame retardant. The flameproofed **cellulose fiber**-contg. articles contain .gtoreq.2% N and, optionally, .gtoreq.1% P and have a LOI .gtoreq.22. These fireproofing agents exhibit improved binding to the **cellulose fibers**.

IT 40165-69-3

(coagent; flameproof finishing of **cellulose fibers** with aminodichlorotriazine derivs.)

RN 40165-69-3 HCA

CN Phosphonic acid, monomethyl ester, ammonium salt (9CI) (CA INDEX NAME)



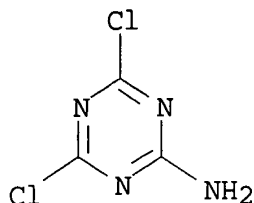
●  $NH_3$

IT 933-20-0, 2-Amino-4,6-dichloro-1,3,5-triazine  
13734-13-9, N,N'-Bis(4,6-dichloro-1,3,5-triazin-2-yl)-p-phenylenediamine 51757-37-0, 2-(4-Aminosulfonylphenylamino)-4,6-dichloro-1,3,5-triazine  
155404-54-9, 2-(2-Aminoethylamino)-4,6-dichloro-1,3,5-triazine 396639-74-0 396639-75-1

(flameproof finishing of **cellulose fibers** with aminodichlorotriazine derivs.)

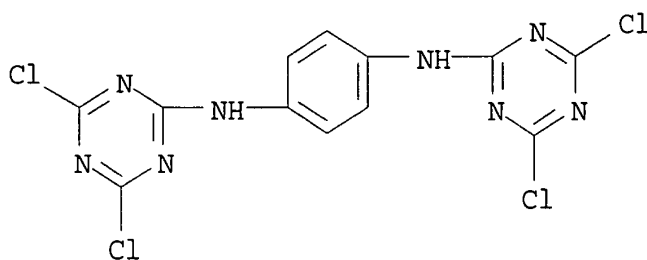
RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



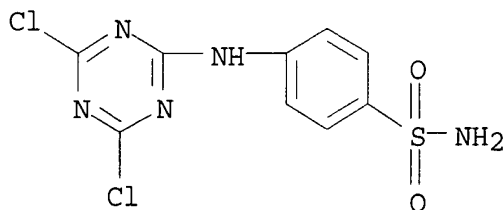
RN 13734-13-9 HCA

CN 1,4-Benzenediamine, N,N'-bis(4,6-dichloro-1,3,5-triazin-2-yl)- (9CI)  
(CA INDEX NAME)



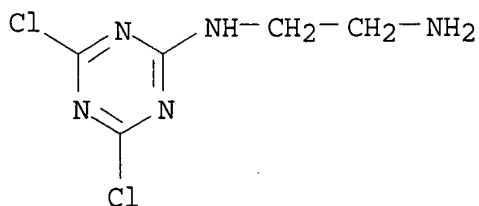
RN 51757-37-0 HCA

CN Benzenesulfonamide, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-  
(9CI) (CA INDEX NAME)



RN 155404-54-9 HCA

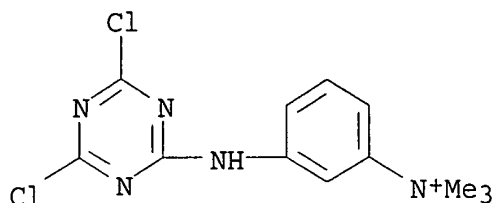
CN 1,2-Ethanediamine, N-(4,6-dichloro-1,3,5-triazin-2-yl)- (9CI) (CA  
INDEX NAME)



RN 396639-74-0 HCA

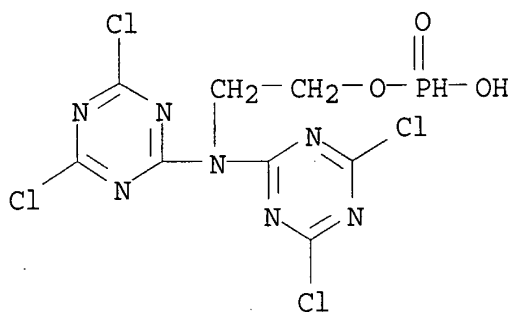
CN Benzenaminium, 3-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-N,N,N-  
trimethyl-, iodide (9CI) (CA INDEX NAME)





● I<sup>-</sup>

RN 396639-75-1 HCA  
 CN Phosphonic acid, mono[2-[bis(4,6-dichloro-1,3,5-triazin-2-yl)amino]ethyl] ester (9CI) (CA INDEX NAME)



IC ICM D06M013-364  
 CC 40-9 (Textiles and Fibers)  
 ST aminotriazine fireproofing agent **cellulose fiber**  
 ; phosphorus compd aminotriazine combination fireproofing agent  
**cellulose fiber**  
 IT **Textiles**  
 (cotton; flameproof finishing of **cellulose**  
**fibers** with aminodichlorotriazine derivs.)  
 IT Fireproofing agents  
 Nonwoven **fabrics**  
 (flameproof finishing of **cellulose fibers**  
 with aminodichlorotriazine derivs.)  
 IT **Rayon**, processes  
 (flameproof finishing of **cellulose fibers**  
 with aminodichlorotriazine derivs.)  
 IT 7558-80-7, Sodium dihydrogen **phosphate** 40165-69-3  
 383179-85-9, Aflammit KWB  
 (coagent; flameproof finishing of **cellulose**  
**fibers** with aminodichlorotriazine derivs.)  
 IT 933-20-0, 2-Amino-4,6-dichloro-1,3,5-triazine  
 13734-13-9, N,N'-Bis(4,6-dichloro-1,3,5-triazin-2-yl)-p-  
 phenylenediamine 51757-37-0, 2-(4-

Aminosulfonylphenylamino)-4,6-dichloro-1,3,5-triazine  
**155404-54-9**, 2-(2-Aminoethylamino)-4,6-dichloro-1,3,5-  
 triazine **396639-74-0** **396639-75-1**

(flameproof finishing of **cellulose fibers**  
 with aminodichlorotriazine derivs.)

L59 ANSWER 3 OF 13 HCA COPYRIGHT 2003 ACS on STN

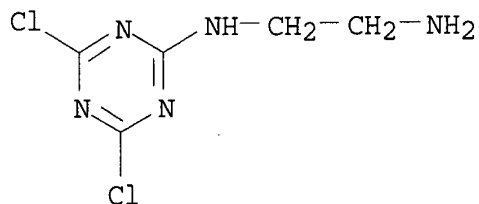
121:59625 Reactive dye composition and method for dyeing or printing  
**fiber** materials. Tokieda, Takemi; Harada, Naoki; Hashizume,  
 Shuhei; Ishii, Koiti; Kawamura, Nobuaki; Miyamoto, Tetsuya; Suzuki,  
 Hiroyuki; Kawabata, Shigeru (Sumitomo Chemical Co., Ltd., Japan).  
 Eur. Pat. Appl. EP 588257 A1 19940323, 68 pp. DESIGNATED STATES: R:  
 BE, CH, DE, ES, FR, GB, IT, LI, NL, PT, SE. (English). CODEN:  
 EPXXDW. APPLICATION: EP 1993-114583 19930910. PRIORITY: JP  
 1992-243171 19920911; JP 1992-259932 19920929; JP 1992-259933  
 19920929; JP 1992-263578 19921001; JP 1993-81813 19930408; JP  
 1993-81814 19930408.

AB A reactive dye compn. contg. a salt of a polyoxyethylene substituted  
 Ph ether ester shows excellent soly. in water and in aq. alkali and  
 can be used to dye a **fiber** material uniformly. A compn.  
 was prepd. from 4-HO3SOCH2CH2SO2C6H4N:NC10H4(SO3H)(NHAc)OH-3,2,6,4  
 73, 4-C9H19C6H4(OCH2CH2)2OOSO3Na (I) 1, Na2SO4 25, and mineral oil  
 emulsion 1 part, dissolved (100 g) in hot water, mixed with Na  
 silicate soln. and aq. NaOH, and dild. with water to 1 L to give a  
 dye soln. A **cotton fabric** was padded with the  
 soln., wound up, sealed in a polyethylene film for 10 h at  
 20.degree., rinsed, and dried to show a uniform deep orange color.  
 In the absence of I the dye pptd. from the soln.

IT **155404-54-9D**, reaction products with sulfonated copper  
 phthalocyanine  
 (polyethylene glycol aryl ether ester solubilizer-contg. compns.  
 of, for uniform dyeing)

RN 155404-54-9 HCA

CN 1,2-Ethanediamine, N-(4,6-dichloro-1,3,5-triazin-2-yl)- (9CI) (CA  
 INDEX NAME)



IC ICM C09B067-24

CC **40-6** (Textiles and Fibers)

IT Dyeing

**Textile** printing

(reactive, polyethylene glycol aryl ether esters as solubilizers  
 in)

IT 147-14-8D, Copper phthalocyanine, sulfonated, reaction products with

amines 2494-88-4D, 3-Aminophenyl 2-sulfatoethyl sulfone, reaction products with sulfonated copper phthalocyanine 2494-89-5D, 4-Aminophenyl 2-sulfatoethyl sulfone, reaction products with sulfonated copper phthalocyanine 5261-31-4 6522-88-9 12217-80-0 17418-58-5, 1-Amino-4-hydroxy-2-phenoxyanthraquinone 27761-75-7 31810-89-6, 1,5-Diaminobromo-4,8-dihydroxyanthraquinone 34293-80-6 40082-29-9D, 3-Aminophenyl vinyl sulfone, reaction products with sulfonated copper phthalocyanine 40859-15-2D, reaction products with sulfonated copper phthalocyanine 55909-92-7 62669-67-4 86293-57-4 94021-00-8 98063-96-8 102924-14-1 104982-61-8 105674-38-2 105895-74-7 105936-66-1 105956-68-1 106483-46-9D, reaction products with sulfonated copper phthalocyanine 107143-06-6 109752-12-7 111233-67-1 115662-23-2 122284-73-5 125662-71-7 137427-91-9 147998-42-3 149124-62-9 149265-20-3 155404-46-9 155404-47-0 155404-48-1 155404-49-2 155404-50-5 155404-51-6 155404-52-7 **155404-54-9D**, reaction products with sulfonated copper phthalocyanine. 156187-70-1 156310-27-9 (polyethylene glycol aryl ether ester solubilizer-contg. compns. of, for uniform dyeing)

L59 ANSWER 4 OF 13 HCA COPYRIGHT 2003 ACS on STN

111:24960 Bifunctional reactive triazine group-containing dyes. Tzikas, Athanassios (Ciba-Geigy A.-G., Switz.). Eur. Pat. Appl. EP 297044 A2 19881228, 72 pp. DESIGNATED STATES: R: BE, CH, DE, ES, FR, GB, IT, LI. (German). CODEN: EPXXDW. APPLICATION: EP 1988-810410 19880615. PRIORITY: CH 1987-2379 19870624.

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

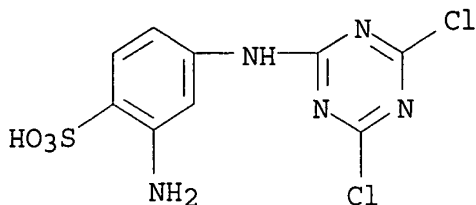
AB The title dyes I [A = an amino substituent contg. SO<sub>2</sub>Z group(s); Z = .beta.-sulfatoethyl, .beta.-thiosulfatoethyl, .beta.-phosphatoethyl, .beta.-acyloxyethyl, .beta.-haloethyl, CH:CH<sub>2</sub>; A<sub>1</sub>, A<sub>2</sub>, R = H, (un)substituted C1-4 alkyl; D = chromophoric residue; Q = H, C1-4 alkyl, CO<sub>2</sub>H, C1-4 alkoxy, halogen, SO<sub>3</sub>H; X, Y = F, Cl, Br, SO<sub>3</sub>H, C1-4 alkylsulfonyl, phenylsulfonyl], useful for dyeing or printing of **cellulose-contg. fabrics**, are prepd. The Na salt of 2-(3'-aminophenyl)amino-4,6-dichloro-1,3,5-triazine-4'-sulfonic acid was diazotized and coupled with the Na salt of 2,6-dihydroxy-3-sulfomethyl-4-methylpyridine, the intermediate condensed with the condensate of 1,3-(H<sub>2</sub>N)2C6H3SO<sub>3</sub>Na-4, and cyanuric chloride and the intermediate condensed with HCl.H<sub>2</sub>N(CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>SO<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>Cl, forming II, which dyed **cellulose fabrics** in a fast greenish yellow shade.

IT 41642-95-9

(coupling of diazotized, with dihydroxy(sulfomethyl)methylpyridine sodium salt)

RN 41642-95-9 HCA

CN Benzenesulfonic acid, 2-amino-4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-, monosodium salt (9CI) (CA INDEX NAME)



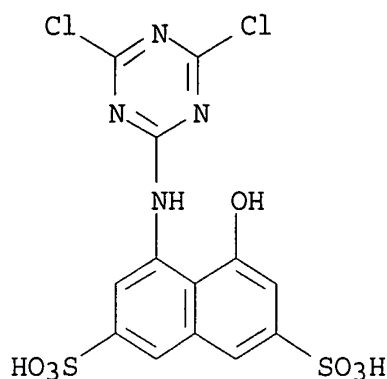
● Na

IC ICM C09B062-04  
ICS C09B062-503; D06P001-38  
CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
Section cross-reference(s): 40  
ST bifunctional reactive azo dye manuf; **textile** printing  
bifunctional reactive dye; **cellulose fabric**  
reactive azo dye  
IT **Textile** printing  
(of **cellulose**-contg. **fabrics**, bifunctional reactive dyes for, manuf. of)  
IT Dyes, reactive  
(bifunctional, manuf. of, for **cellulose**-contg. **fabrics**)  
IT **41642-95-9**  
(coupling of diazotized, with dihydroxy(sulfomethyl)methylpyridine sodium salt)  
IT 121357-68-4  
(dye, for **cellulose**-contg. **fabrics**, manuf. of)  
IT 120439-75-0P  
(manuf. of, as bifunctional reactive blue dye for **cellulose**-contg. **fabrics**)  
IT 120471-68-3P  
(manuf. of, as bifunctional reactive dye for **cellulose**-contg. **fabrics**)  
IT 120439-76-1P  
(manuf. of, as bifunctional reactive navy blue for **cellulose**-contg. **fabrics**)  
IT 120439-72-7P 120439-73-8P 120439-74-9P  
(manuf. of, as bifunctional reactive red dye for **cellulose**-contg. **fabrics**)  
IT 120439-72-7P  
(manuf. of, as bifunctional reactive red dye for **cellulose**-contg. materials)  
IT 120439-70-5P

- (manuf. of, as bifunctional reactive yellow dye for **cellulose-contg. fabrics**)
- IT 120439-69-2P 120439-77-2P  
(manuf. of, as bifunctional reactive yellow dye for **cellulose-contg. materials**)
- IT 120461-89-4P  
(manuf. of, as bifunctional yellow dye for **cellulose-contg. fabrics**)
- IT 120439-71-6P  
(manuf. of, as yellow bifunctional reactive for **cellulose-contg. fabrics**)
- IT 54243-60-6  
(mixts. of, with bifunctional reactive dyes, for **cotton-polyester fiber blends**)
- L59 ANSWER 5 OF 13 HCA COPYRIGHT 2003 ACS on STN  
107:79475 Reactive dyes for cold pad-batch dyeing. Tzikas, Athanassios; Aeschlimann, Peter; Herzig, Paul (Ciba-Geigy A.-G., Switz.). PCT Int. Appl. WO 8701123 A1 19870226, 149 pp. DESIGNATED STATES: W: BR, JP, KR. (German). CODEN: PIXXD2. APPLICATION: WO 1986-CH115 19860808. PRIORITY: CH 1985-3503 19850814.
- GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

- AB The title compds. I [B1, B2 = H, (un)substituted C1-4 alkyl; D = monoazo, polyazo, metal complex azo, anthraquinone, phthalocyanine, formazan, azomethine, dioxazine, phenazine, stilbene, triphenylmethane, xanthene, thioxanthone, nitroaryl, naphthoquinone, pyrenequinone, perylenetetra-carboximide dye residue; R = ZSO2CH2Z1(Y)N(V), ZSO2(CH2)mO(CH2)pNR1, ZSO2Z2NHZ2NH, Q; V = H, (un)substituted C1-4 alkyl; R1 = H, C1-6 alkyl; Z = sulfatoethyl, .beta.-thiosulfatoethyl, .beta.-**phosphatoethyl**, AcOCH2CH2, .beta.-haloethyl, H2C:CH; Z1 = C1-6 alkylene; Z2 = C2-6 alkylene; m, p, q = 1-6; U = CO, SO2; X = F, Cl, Br, SO3H, C1-4 alkylsulfonyl, phenylsulfonyl; n = 1-2; ring A is a substituted benzene or naphthalene moiety], useful for cold pad-batch dyeing of **cellulose-contg. fabrics**, are prepd. Thus, 1-(4-sulfophenyl)-3-carboxy-4-(4-amino-2-sulfophenylazo)-5-pyrazolone was condensed with cyanuric fluoride, and the difluorotriazine condensed with Cl(CH2)2O2S(CH2)2NHCOC6H4NH2-4 forming II, which dyed **cotton** in a golden-yellow tone.
- IT 7538-88-7  
(coupling of, with diazotized amino(dichlorotriazinylamino)benzenesulfonic acid)
- RN 7538-88-7 HCA  
CN 2,7-Naphthalenedisulfonic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-5-hydroxy- (9CI) (CA INDEX NAME)

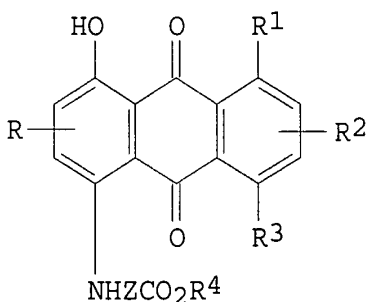


IT 9004-34-6P  
 (rayon, dyes for, bifunctional reactive compds. as,  
 manuf. of)  
 RN 9004-34-6 HCA  
 CN Cellulose (8CI, 9CI) (CA INDEX NAME)  
 \*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
 IC ICM C09B062-04  
 ICS C09B062-503; D06P001-38  
 CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)  
 Section cross-reference(s): 40  
 ST reactive azo dye **cotton**; bifunctional reactive azo dye  
**cotton**  
 IT **Rayon**, uses and miscellaneous  
 (dyes for, bifunctional reactive compds. as, manuf. of)  
 IT **Textile** printing  
 (on **cotton**, with bifunctional reactive dyes)  
 IT Dyes, reactive  
 (bifunctional, for **cellulose-contg. fabrics**,  
 manuf. of)  
 IT 118-03-6, 2-Amino-3,6,8-naphthalenetrisulfonic acid  
 (coupling of diazotized, with (aminophenyl)**urea**)  
 IT 134-34-9 **7538-88-7**  
 (coupling of, with diazotized amino(dichlorotriazinylamino)benzen  
 esulfonic acid)  
 IT 25711-72-2, 3-Aminophenyl **urea**  
 (coupling of, with diazotized aminonaphthalenetrisulfonic acid)  
 IT 109518-34-5P 109521-21-3P 109536-86-9P  
 (manuf. of, as bifunctional reactive blue dye for **cotton**  
 )  
 IT 109518-24-3P  
 (manuf. of, as bifunctional reactive brown dye for **cotton**  
 )  
 IT 109518-21-0P 109518-22-1P 109518-23-2P 109518-33-4P  
 109520-90-3P 109520-91-4P 109536-36-9P  
 (manuf. of, as bifunctional reactive dye for **cotton**)  
 IT 109518-35-6P 109518-36-7P 109518-37-8P 109518-38-9P  
 109518-40-3P

- (manuf. of, as bifunctional reactive navy blue dye for cotton)
- IT 109518-25-4P 109518-26-5P 109518-27-6P 109536-37-0P  
 109536-38-1P 109536-39-2P 109536-40-5P  
 (manuf. of, as bifunctional reactive red dye for cotton)
- IT 109518-13-0P 109518-14-1P 109518-15-2P 109518-16-3P  
 109518-17-4P 109518-18-5P 109518-19-6P 109518-20-9P  
 109518-31-2P 109518-39-0P  
 (manuf. of, as bifunctional reactive yellow dye for cotton)
- IT 109518-28-7P 109518-29-8P 109518-30-1P  
 (manuf. of, as bifunctional red reactive dye for cotton)
- IT 109518-41-4P  
 (manuf. of, as blue bifunctional reactive dye for cotton)
- IT 9004-34-6P  
 (rayon, dyes for, bifunctional reactive compds. as, manuf. of)

L59 ANSWER 6 OF 13 HCA COPYRIGHT 2003 ACS on STN  
 91:194619 Coloration process. Fishwick, Brian Ribbons; Boyd, Violet; Glover, Brian; Phillips, Duncan Adrian Sidney (Imperial Chemical Industries Ltd., UK). Brit. GB 1543726 19790404, 4 pp. Addn. to Brit. 1,456,586. (English). CODEN: BRXXAA. APPLICATION: GB 1975-36123 19760811.

GI



AB Anthraquinone disperse dyes I (R, R2 = H, Cl, or Br; R1, R3 = OH, NHZCO2R4; R4 = cyclohexyl, or optionally substituted alkyl; Z = (CH2)2 or (CH2)3) were manufd. which are useful in printing of **cellulosic fiber**-polyester blends. Thus, 1,5-diamino-4,8-dihydroxyanthraquinone [145-49-3] 84, acrylic acid [79-10-7] 600, and 40% aq. benzyltrimethylammonium hydroxide 12 parts were heated at 110-20.degree. until no free amine was detected. The isolated product, 1,5-bis(.beta.-carboxyethylamino)-4,8-dihydroxyanthraquinone [63649-80-9] 8, MeO(CH2)2OH [109-86-4]

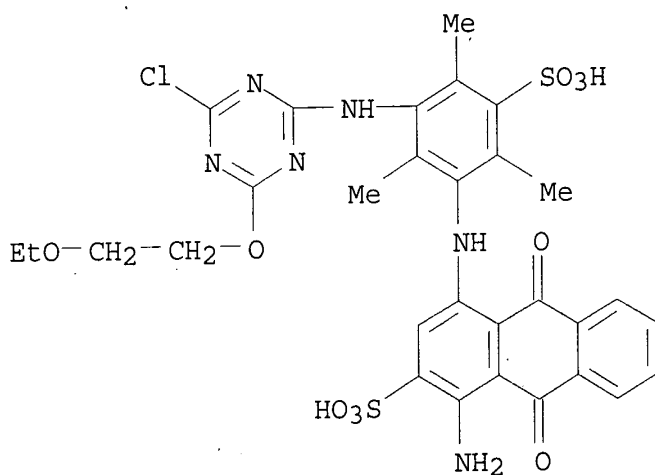
50, and H<sub>2</sub>SO<sub>4</sub> 6 parts were stirred 3 h at 50-5.degree.. The cooled mixt. was filtered and the residue washed well to yield I [R = R<sub>2</sub> = H; R<sub>3</sub> = OH; R<sub>1</sub> = NHZCO<sub>2</sub>R<sub>4</sub>; R<sub>4</sub> = OMe; Z = (CH<sub>2</sub>)<sub>2</sub>] (II) [68479-79-8]. To a dispersion contg. 2 parts II in 7 parts water contg. 1 part bis(2-sulfonaphth-1-yl)methane disodium salt was added Na alginate 48, pine oil-sulfonated sperm oil emulsion 2, urea 10, Na m-nitrobenzenesulfonate 1, Na hexametaphosphate 0.6, 1-amino-4-[2',4',6'-trimethyl-3'-sulfo-5'-(4"-chloro-6"-.beta.-ethoxyethoxy-1",3",5"-triazin-2"-ylamino)anilino]anthraquinone 2-sulfonic acid disodium salt [70210-27-4] 1.25, copper phthalocyanine Na salt [147-14-8] 1.25, and water to 100 parts which when printed on a Terylene-cotton blend gave good solid greenish blue shades and good reserve on undyed portions.

IT 70210-27-4

(dyes, printing of cotton-polyester blends with anthraquinone disperse dyes and)

RN 70210-27-4 HCA

CN 2-Anthracenesulfonic acid, 1-amino-4-[[3-[[4-chloro-6-(2-ethoxyethoxy)-1,3,5-triazin-2-yl]amino]-2,4,6-trimethyl-5-sulfohenyl]amino]-9,10-dihydro-9,10-dioxo-, disodium salt (9CI)  
(CA INDEX NAME)



● 2 Na

IC D06P003-82; D06P003-87; D06P003-872

CC 40-5 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

ST carboxylate ester anthraquinone dye; anthraquinone disperse dye printing; cotton polyester blend printing; hydroxyanthraquinone disperse dye

IT Textile printing

(on cotton-polyester blends, with anthraquinone



- disperse dye-contg. compns.)
- IT Dyes, anthraquinone  
(disperse, for printing cotton-polyester blends)
- IT 71940-04-0  
(dyes, printing of cotton-polyester blends with)
- IT 147-14-8D, derivs. 70210-27-4  
(dyes, printing of cotton-polyester blends with anthraquinone disperse dyes and)
- IT 68479-79-8P 71940-03-9P  
(prepn. of, disperse dyes for printing of cotton-polyester blends)

L59 ANSWER 7 OF 13 HCA COPYRIGHT 2003 ACS on STN

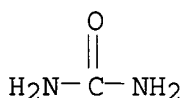
90:188415 Durable flame resistance via reaction of cotton cellulose bearing aromatic amino groups with tetrakis(hydroxymethyl)phosphonium chloride. Hebeish, A.; Waly, A.; El-Kashouti, M. A. (Text. Res. Div., Natl. Res. Cent., Cairo, Egypt). Journal of Applied Polymer Science, 23(6), 1803-10 (English) 1979. CODEN: JAPNAB. ISSN: 0021-8995.

AB Cotton fabric, modified by reaction with 2,4-dichloro-6-(p-nitroanilino)-s-triazine [2352-36-5] followed by redn. of the NO<sub>2</sub> group, was allowed to react with (HOCH<sub>2</sub>)<sub>4</sub>PCl(I) [124-64-1] under a variety of conditions using the pad-dry-thermofixation technique. I reacted with cotton contg. 0.4-1.3% N even in the absence of catalyst at temps. as low as 30.degree. for 10 min to impart durable flame resistance; the extent of reaction was enhanced by increasing the temp. to 80.degree. but remained practically const. at temps. >80.degree.. The reaction was also enhanced in acidic media (pH 4-6) and inhibited in alk. media (pH 9-11). Incorporation of Lyofix CHN [9003-08-1] (9%), MgCl<sub>2</sub>·6H<sub>2</sub>O (1%), and urea [57-13-6] (5%) along with I (25%) in the treating bath required a curing temp. of 120.degree. and a curing time of 5 min to achieve a fabric contg. .ltoreq.2.7% P and excellent durable flame resistance. A tentative mechanism for the reaction between I and the modified cotton was proposed.

IT 57-13-6, uses and miscellaneous  
(cotton fabric fireproofing by tetrakis(hydroxymethyl)phosphonium chloride in presence of)

RN 57-13-6 HCA

CN Urea (8CI, 9CI) (CA INDEX NAME)



IT 2352-36-5  
(cotton fabric modified by, reduced, reaction with tetrakis(hydroxymethyl)phosphonium chloride, durable flame resistance in relation to)

RN 2352-36-5 HCA  
CN 1,3,5-Triazin-2-amine, 4,6-dichloro-N-(4-nitrophenyl)- (9CI) (CA INDEX NAME)  
\*\*\* SUBSTANCE INFORMATION NOT AVAILABLE \*\*\*  
CC 39-10 (Textiles)  
ST **phosphonium** fireproofing aminated **cotton**;  
**tetramethylolphosphonium** chloride reaction **cotton**;  
melamine resin fireproofing **cotton**  
IT Fireproofing  
(of amine-modified **cotton fabric** with  
tetrakis(hydroxymethyl)**phosphonium** chloride)  
IT 7786-30-3, uses and miscellaneous  
(catalysts, **cotton fabric** fireproofing in  
presence of trimethylolmelamine and)  
IT 57-13-6, uses and miscellaneous 9003-08-1  
(**cotton fabric** fireproofing by  
tetrakis(hydroxymethyl)**phosphonium** chloride in presence  
of)  
IT 2352-36-5  
(**cotton fabric** modified by, reduced, reaction  
with tetrakis(hydroxymethyl)**phosphonium** chloride,  
durable flame resistance in relation to)  
IT 124-64-1  
(reaction of, with amine-modified **cotton fabric**  
, durable flame resistance in relation to)  
  
L59 ANSWER 8 OF 13 HCA COPYRIGHT 2003 ACS on STN  
83:194949 Dyes as they affect the burning characteristics of  
flame-retardant **textiles**. Timpa, Judy D.; Segal, Leon;  
Drake, George L., Jr. (South. Reg. Res. Cent., ARS, New Orleans, LA,  
USA). U. S., Agric. Res. Serv., South. Reg., [Rep.], ARS-S-60,  
169-72 (English) 1975. CODEN: XAGSBY.  
AB Dye levels had a definite effect on the burning characteristics of  
**cotton fabrics** flameproofed with  
tetrakis(hydroxymethyl)**phosphonium** hydroxide (I)  
[512-82-3] and an amide, I and NH<sub>3</sub> [7664-41-7], and  
tetrakis(hydroxymethyl)**phosphonium** chloride [124-64-1] and  
**urea** [57-13-6] as well as controls contg. no fire  
retardant. The dyes used were C. I. Direct Green 28 [6471-09-6], C.  
I. Reactive Red 6 [16071-80-0], C. I. Sulfur Brown 52  
[57035-57-1], C. I. Vat Blue 5 [2475-31-2] and the fluorescent  
brightening agent C.I. Fluorescent Brightening Agent 32  
[25738-36-7].  
IT 16071-80-0  
(flammability of **cotton textiles** contg.  
**phosphonium** compds. and)  
RN 16071-80-0 HCA  
CN Cuprate(3-), [2-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-5-(hydroxy-  
.kappa.O)-6-[[2-(hydroxy-.kappa.O)-5-sulfohenyl]azo-.kappa.N1]-1,7-  
naphthalenedisulfonato(5-)]-, trihydrogen (9CI) (CA INDEX NAME)  
\*\*\* SUBSTANCE INFORMATION NOT AVAILABLE \*\*\*  
CC 39-7 (Textiles)

- ST flammability dye **cotton textile**; burning  
fireproofed **cotton**
- IT Dyes  
Fluorescent brighteners  
(flammability of **cotton textiles** contg.  
**phosphonium** compds. and)
- IT **Textiles**  
(flammability of fireproofed **cotton**, effect of dyes and  
fluorescent brightening agents on)
- IT Flammability  
(of fireproofed **cotton textiles**, effect of  
dyes and fluorescent brighteners on)
- IT 124-64-1 512-82-3  
(fireproofing agents, flammability of **cotton**  
**textiles** finished by, effect of dyes and fluorescent  
brighteners on)
- IT 1327-18-0 2475-31-2 6471-09-6 16071-80-0 25738-36-7  
(flammability of **cotton textiles** contg.  
**phosphonium** compds. and)
- IT 57-13-6, uses and miscellaneous 7664-41-7, uses and  
miscellaneous  
(flammability of **cotton textiles** fireproofed  
by **phosphonium** compds. and, effect of dyes and  
fluorescent brighteners on)
- L59 ANSWER 9 OF 13 HCA COPYRIGHT 2003 ACS on STN  
83:165593 Dyes and flame-retardant **cotton textiles**.  
Timpa, Judy D.; Segal, Leon; Drake, George L., Jr. (South. Reg. Res.  
Cent., ARS, New Orleans, LA, USA). Journal of Fire and  
Flammability/Fire Retardant Chemistry Supplement, 2(2, Suppl.),  
83-93 (English) 1975. CODEN: FRCHD6. ISSN: 0097-0247.
- AB The effect of 5 dyes on the flammability of **cotton**  
flannelette fireproofed with tetrakis(hydroxymethyl)  
**phosphonium** hydroxide (I) [512-82-3]-**urea** [  
57-13-6]-trimethylolmelamine [1017-56-7], I-NH3 [7664-41-7],  
or tetrakis(hydroxymethyl)**phosphonium** chloride (II)  
[124-64-1]-**urea** were studied and dye pickup and oxygen  
index were affected by the order of treatment. The application of  
the 1st or 3rd flame retardants prior to dyeing with any of the 5  
dyes inhibited the amt. of dye pickup. With I-NH3 finish, the order  
of treatment was not as decisive because dye pickup was not  
inhibited by the presence of the flame retardant.
- IT 16038-15-6  
(flammability of fireproofed **cotton** dyed with,  
treatment order effect on)
- RN 16038-15-6 HCA  
CN Cuprate(3-), [2-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-5-(hydroxy-  
.kappa.O)-6-[[2-(hydroxy-.kappa.O)-5-sulfohenyl]azo-.kappa.N1]-1,7-  
naphthalenedisulfonato(5-)]-, trisodium (9CI) (CA INDEX NAME)
- \*\*\* SUBSTANCE INFORMATION NOT AVAILABLE \*\*\*
- CC 39-3 (Textiles)
- ST dyeing fireproofing **cotton textile**; flammability

- dyed fireproof **cotton**
- IT **Textiles**  
(flammability of, effect of dyeing and fireproofing order on)
- IT Fireproofing  
(of **cotton textiles**, dyeing effect on)
- IT Flammability  
(of **cotton textiles**, effects of dyeing and fireproofing order on)
- IT 1264-32-0 1327-18-0 2475-31-2 6471-09-6 16038-15-6  
(flammability of fireproofed **cotton** dyed with, treatment order effect on)
- IT 57-13-6, uses and miscellaneous 124-64-1 512-82-3  
1017-56-7 7664-41-7, uses and miscellaneous  
(in fireproofing of **cotton textiles**, dyeing effect on)
- L59 ANSWER 10 OF 13 HCA COPYRIGHT 2003 ACS on STN
- 79:93346 Dyeing **fibrous textiles**. Blackhall, Alexander; Heywood, Frank L. I.; Macheta, Zygmunt; Rennison, Stuart C. (Imperial Chemical Industries Ltd.). Brit. GB 1318879 19730531, 14 pp. (English). CODEN: BRXXAA. APPLICATION: GB 1969-45291 19690915.
- AB Dyeing nylon 66 [32131-17-2], nylon 6 [25038-54-4], wool serge **fabric**, or mercerized **cotton** with a dye contg. an NH<sub>2</sub> group bonded to a satd. C atom, followed by treatment with a 2,4-dichloro-s-triazine deriv. which reacts with the dye NH<sub>2</sub> group, gave dyed **fabrics** having improved fastness to many washing treatments. Thus, knitted, bulked nylon 66 **fabric** was dyed with the dye 3 [41973-80-2] obtained by coupling diazotized 4-(.beta.-aminoethylaminosulfonyl)aniline with 2-amino-8-naphthol-3,6-disulfonic acid and then treated with 2-(2-chloroanilino)-4,6-dichloro-s-triazine (I) [101-05-3]. The **fabric** was dyed a red shade having improved fastness to extn. with boiling aq. pyridine, to washing, and to the perspiration test than that of the dyed **fabric** untreated with I.
- IT 13734-13-9  
(amino compd.-dyed **textiles** treated with, improved dye fixation in)
- RN 13734-13-9 HCA
- CN 1,4-Benzenediamine, N,N'-bis(4,6-dichloro-1,3,5-triazin-2-yl)- (9CI)  
(CA INDEX NAME)
- \*\*\* SUBSTANCE INFORMATION NOT AVAILABLE \*\*\*
- IC D06P
- CC 39-7 (Textiles)
- ST nylon dyeing; polyamide **fiber** dyeing; **cotton** dyeing; wool dyeing; chlorotriazine dyeing treatment; triazine chloro dyeing treatment
- IT Polyamide **fibers**  
(dyeing of, dichlorotriazine deriv. treatment for improved fixation in)
- IT Dyeing  
(of **textiles**, dichlorotriazine deriv. treatment for

- improved fixation in)
- IT 101-05-3 3533-55-9 **13734-13-9** 42219-10-3 42219-11-4  
42219-12-5  
(amino compd.-dyed **textiles** treated with, improved dye  
fixation in)
- L59 ANSWER 11 OF 13 HCA COPYRIGHT 2003 ACS on STN  
76:142340 **Triazinylaminoalkylphosphonates** for flameproofing  
**textiles**. Weil, Edward D.; Fearing, Ralph B. (Stauffer  
Chemical Co.). Ger. Offen. DE 2131040 19720127, 45 pp. (German).  
CODEN: GWXXBX. APPLICATION: DE 1971-2131040 19710623.
- AB The title compds. are prepd. by 7 reactions: (1) a methylomelamine  
with a trialkyl phosphite; (2) an alkoxymethylmelamine with (a) a  
dialkyl phosphorochloridite or (b) an equiv. amt. of a mixt. of a  
trialkyl phosphite and phosphoric trichloride; (3) cyanuric chloride  
with a dialkyl 1-**aminoalkylphosphonate** and, if necessary,  
a secondary amine; (4) an alkoxymethylmelamine with phosgene  
followed by reaction with a trialkyl phosphite; (5) an  
alkoxymethylmelamine with a dialkyl **phosphonate**; (6) an  
alkoxymethylmelamine with a trialkyl phosphite and a proton donor;  
and (7) a methylomelamine or a C1-C18-alkoxymethylmelamine in the  
presence of an acid catalyst with a dialkyl 1-hydroxyalkyl  
**phosphonate**. Thus, N2,N4-bis(**diethylphosphonomethyl**  
)-N6-methylolmelamine (I) [34621-61-9] was prepd. from  
trimethylomelamine and trimethyl phosphite by heating at 153.deg..  
An aq. soln. contg. I and Zn(NO3)2 was coated on a wooden board,  
heated 12 hr at 95.deg. to give a hard, clear, coating resistant to  
water and aq. Na2CO3, and imparting to the substrate flame  
resistance. A mixt. of I and Epon 828 [25068-38-6] gave a clear  
mount and was hardened at 95.deg.; the resin, on ignition, was  
self-extinguishing. Other examples (16) are given. A  
**phosphonate** prepd. from PCl3, (MeO)3P, and  
hexakis(methoxymethyl)melamine (contg. 1.5 **phosphonate**  
groups/mol.) was prepd. and formulated with **urea**,  
Zn(NO3)2, and aq. octylphenoxypolyethoxyethanol; the formulation was  
used as a **textile** finish for **cotton** at a  
phosphorus concn. 1.08-1.3% (based on the **fabric**) to  
impart flame resistance to the **fabric**.
- IT **36362-43-3**  
(fireproofing agents, for **cellulosic** materials)
- RN 36362-43-3 HCA
- CN Phosphonic acid, [1-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-1-  
methylethyl]-, diethyl ester (9CI) (CA INDEX NAME)
- \*\*\* SUBSTANCE INFORMATION NOT AVAILABLE \*\*\*
- IC C07D; D06M; A01N
- CC 39 (Textiles)  
Section cross-reference(s): 28
- ST triazine **phosphonate** flameproofing **textile**;  
melamine **phosphonate** flameproofing **textile**
- IT **Textiles**  
(fireproofing of **cellulosic**, by  
**triazinylaminoalkylphosphonates**)

- IT Wood  
(fireproofing of, with **triazinylaminoalkylphosphonates**)
- IT Fireproofing  
(of **cellulosic** materials, by  
**triazinylaminoalkylphosphonates**)
- IT Coating materials  
(**triazinylaminoalkylphosphonates**, on wood)
- IT 1,3,5-Triazine-2,4,6-triamine, methoxymethyl derivs., reaction products with phosphorus compds.  
1,3,5-Triazine-2,4,6-triamine, N,N,N',N',N'',N'''-hexakis(methoxymethyl)-, reaction products with phosphorus compd.  
Carbonic dichloride, reaction products with hexamethoxymethylmelamine and triethyl phosphite  
**Phosphonic** acid, diethyl ester, reaction products with hexamethoxymethylmelamine  
Phosphorochloridic acid, dimethyl ester, reaction products with hexamethoxymelamine  
Phosphorous acid, triethyl ester, reaction products with hexamethoxymethylmelamine  
Phosphorous acid, trimethyl ester, reaction products with hexamethoxymethylmelamine  
Phosphorous trichloride, reaction products with hexamethoxymethylmelamine  
(fireproofing agents, for **cellulosic** materials)
- IT 25068-38-6  
(fireproofing agents for, **triazinylaminoalkylphosphonates** as)
- IT 34621-61-9 **36362-43-3** 36378-79-7 · 36476-06-9  
(fireproofing agents, for **cellulosic** materials)
- L59 ANSWER 12 OF 13 HCA COPYRIGHT 2003 ACS on STN  
62:44524 Original Reference No. 62:7929e-g Dyeing of **cellulosic** materials. Siegel, Edgar; Bayer, Otto (Farbenfabriken Bayer A.-G.). BE 639476 19640302, 18 pp. (Unavailable). PRIORITY: DE 19621102.
- GI For diagram(s), see printed CA Issue.
- AB **Fibers** contg. OH groups are treated with mixts. of a dye which contains hydroxyalkyl and acylatable amino groups and a polyfunctional acylating agent, such as 2-[N-methyl-N-(7-sulfo-2-naphthyl)-amino]-4,6-dichloro-s-triazine (I), in the presence of an alkali metal hydroxide, carbonate, bicarbonate, or **phosphate** to give fast colors. Thus, 35 parts ClCO<sub>2</sub>Ph is added dropwise at pH 5-7 at 35.degree. to a soln. of 41.7 parts II (R = H) in 700 parts H<sub>2</sub>O to give II (R = CO<sub>2</sub>Ph) (III). The III is sepd. and added to a mixt. of 250 parts H<sub>2</sub>O and 24 parts HN(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>, and the mixt. is agitated 4 hrs. at 50.degree. and 6 hrs. at room temp. to give II [R = CON(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>] (IV). Cyanuric chloride (1 mole) is treated with 1 mole 2,7-MeNH(HO<sub>3</sub>S)C<sub>10</sub>H<sub>6</sub> in Me<sub>2</sub>CO-H<sub>2</sub>O at 0-3.degree. at pH 3-6 to give I. Also prepd. is CuPc[SO<sub>2</sub>N(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>]<sub>2</sub>(SO<sub>3</sub>H)<sub>2</sub> (Pc = phthalocyanine). **Cotton** is treated with a printing paste prepd. from IV 40, I 40, **urea** 100, 20% Na<sub>2</sub>CO<sub>3</sub> 50, H<sub>2</sub>O 270, and alginate thickener 500 parts, dried at 80.degree. steamed 7 min. at 103.degree., rinsed, and soaped at the boil to give a yellow

- print which is fast to washing and light.
- IT 3267-17-2, 2-Naphthalenesulfonic acid, 7-[(4,6-dichloro-s-triazin-2-yl)methylamino]-  
(dyes from, **cotton** dyeing with, in alkaline media)
- RN 3267-17-2 HCA
- CN 2-Naphthalenesulfonic acid, 7-[(4,6-dichloro-1,3,5-triazin-2-yl)methylamino]- (9CI) (CA INDEX NAME)
- \*\*\* SUBSTANCE INFORMATION NOT AVAILABLE \*\*\*
- CC 47 (Textiles)
- IT **Textile** printing  
(with pyrazolecarboxylic acid amino derivs. coupled with sulfonated amino azo dyes)
- IT Phthalocyaninedisulfonic acid, bis[bis(2-hydroxyethyl)sulfamoyl]-, copper complex  
(dye from 7-[(4,6-dichloro-s-triazin-2-yl)methylamino]-2-naphthalenesulfonic acid and, dyeing of **cotton** with, in alk. media)
- IT 107205-79-8, Copper, [dihydrogen bis[bis(2-hydroxyethyl)sulfamoyl]phthalocyaninedisulfonato(2-)]-  
(dye from 7-[(4,6-dichloro-5-triazin-2-yl)methylamino]-2-naphthalenesulfonic acid and, dyeing of **cotton** with, in alkaline media)
- IT 3267-17-2, 2-Naphthalenesulfonic acid, 7-[(4,6-dichloro-s-triazin-2-yl)methylamino]-  
(dyes from, **cotton** dyeing with, in alkaline media)
- L59 ANSWER 13 OF 13 HCA COPYRIGHT 2003 ACS on STN
- 58:9261 Original Reference No. 58:1576e-f Fluorochemical treatment for making **fabrics** oil- and water-repellent. Kageyama, Ikuzo; Katsushima, Atsuo; Kato, Takahisa; Suehiro, Kenji (Osaka Kinzoku Kogyo Co.). Kogyo Kagaku Zasshi, 65, 1207-11 (Unavailable) 1962. CODEN: KKGZA7. ISSN: 0368-5462.
- AB The oil- and water-repellent characteristics of the following synthesized fluoro compds. were examd.: RCO<sub>2</sub>H complexes of Cr basic chlorides, [(RCO<sub>2</sub>)<sub>2</sub>Cr-(OH)<sub>x</sub>(C<sub>3</sub>H<sub>7</sub>OH)<sub>y</sub>]<sub>m</sub> (x + y = 4), Al, Fe, Zr, Cu salts of RCO<sub>2</sub>H, RCO<sub>2</sub>H esters of poly(vinyl alc.), RCO<sub>2</sub>H esters of epoxide resins, phenol-**HCHO** resins treated with RCOOH, [CH(O<sub>2</sub>CH<sub>2</sub>-CH<sub>2</sub>NHCOR)CH<sub>2</sub>]<sub>n</sub>, RCONH(CH<sub>2</sub>)<sub>2</sub>O<sub>2</sub>CH: CH<sub>2</sub>, RCON(CH<sub>2</sub>)<sub>2</sub>, RCONH(CH<sub>2</sub>)<sub>2</sub>R' (R' is 4-chloro-1-pyridyl), and RCONH-(CH<sub>2</sub>)<sub>2</sub>O<sub>2</sub>CCH<sub>2</sub>Cl, where R is C<sub>3</sub>F<sub>7</sub>, C<sub>7</sub>F<sub>15</sub>, H(CF<sub>2</sub>)<sub>2</sub>, H(CF<sub>2</sub>)<sub>4</sub>, H(CF<sub>2</sub>)<sub>6</sub>, H(CF<sub>2</sub>)<sub>8</sub>, or Cl(CF<sub>2</sub>CDCl)<sub>2</sub>CF<sub>2</sub>. The compds. contg. C<sub>n</sub>F<sub>2n+1</sub> were most repellent, the compds. contg. H(CF<sub>2</sub>)<sub>n</sub> were extremely poor repellents, the compds. contg. Cl(CF<sub>2</sub>CFCl)<sub>2</sub>CF<sub>2</sub> were more repellent than those contg. H(CF<sub>2</sub>)<sub>n</sub>, the polymers having polyfluoroalkyl side chains were more repellent than the low-mol.-wt. compds., and the compds. contg. **cellulose**-reactive groups were less repellent than the polymeric compds.
- IT 2560-24-9, Nonanamide, N-[2-[(4,6-dichloro-s-triazin-2-yl)amino]ethyl]-2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro-  
3801-74-9, Octanamide, N-[2-[(4,6-dichloro-s-triazin-2-yl)amino]ethyl]-2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-  
(oil and water repellent properties of)

RN 2560-24-9 HCA  
 CN Nonanamide, N-[2-[(4,6-dichloro-s-triazin-2-yl)amino]ethyl]-  
 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro- (7CI, 8CI) (CA  
 INDEX NAME)  
 \*\*\* SUBSTANCE INFORMATION NOT AVAILABLE \*\*\*  
 CC 47 (Textiles)  
 IT Oils  
 (-proofing, of **textiles**, fluorochemicals for)  
 IT Fluorocarbons  
 (for **textile** oil- and water-repellent finishing)  
 IT Waterproofing  
 (of **textiles**, fluorochemicals for)  
 IT **Textiles**  
 (oil- and waterproofing of, fluorochemicals for)  
 IT Octanamide, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-N-(2-  
 hydroxyethyl)-, dihydrogen **phosphate**, NH<sub>4</sub> salt  
 (esters, oil and water repellent properties of)  
 IT Fluorine compounds  
 (for **textile** oil- and water-repellent finishing)  
 IT 755-10-2, Heptanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,7-dodecafluoro-,  
 zirconium salt 908-55-4, Aziridine, 1-(pentadecafluorooctanoyl)-  
 1550-79-4, Hexanoic acid, 3,5,6-trichloro-2,2,3,4,4,5,6,6-octafluoro-  
 , zirconium salt 1766-13-8, Octanoic acid, pentadecafluoro-,  
 aluminum salt 2059-18-9, Aziridine, 1-  
 (2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluorononanoyl)-  
 2357-58-6, Nonanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-  
 hexadecafluoro-, zirconium salt **2560-24-9**, Nonanamide,  
 N-[2-[(4,6-dichloro-s-triazin-2-yl)amino]ethyl]-  
 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro- **3801-74-9**,  
 Octanamide, N-[2-[(4,6-dichloro-s-triazin-2-yl)amino]ethyl]-  
 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro- 89560-94-1,  
 Octanoic acid, pentadecafluoro-, iron salt  
 (oil and water repellent properties of)

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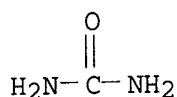
L60 ANSWER 1 OF 42 HCA COPYRIGHT 2003 ACS on STN

138:171762 Durable pleating of natural **fiber** materials by  
 environmentally friendly method. Yamada, Eiji; Shimizu, Yuko;  
 Yamamoto, Genji (Kanehisa K. K., Japan; Art K. K.; Sankyo Tekkosho  
 K. K.). Jpn. Kokai Tokkyo Koho JP 2003049363 A2 20030221, 7 pp.  
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-268019 20010801.

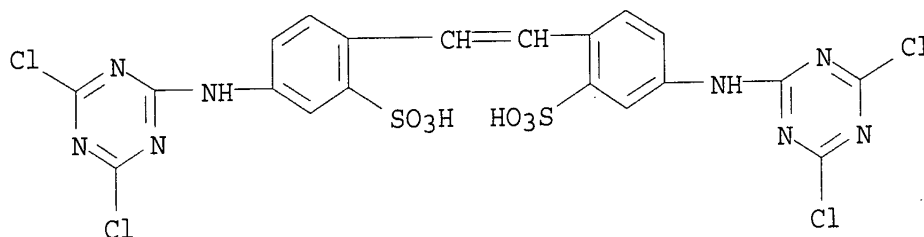
AB The **fiber** materials are high-temp. pleated with  
 hydrophilic di-halogeno-s-triazines and crosslinking aids contg.  
 aliph. and/or arom. polyhydric alcs., polyfunctional amino compds.,  
 polyhydric phenols, monosaccharides, polysaccharides, and/or  
 proteins and then wet-heated. Thus, a **cotton**  
**fabric** was padded in a soln. contg. 2,6-dichloro-4-hydroxy-s-  
 triazine Na salt and Na alginate, dried, hot-pleated, steam-heated,  
 and processed to give a pleated **fabric** showing good  
 washfastness.



IT 57-13-6, **Urea**, uses  
 (crosslinking aids; durable pleating of natural **fabrics**  
 with hydrophilic dihalogenotriazines and crosslinking aids)  
 RN 57-13-6 HCA  
 CN Urea (8CI, 9CI) (CA INDEX NAME)



IT 16013-46-0  
 (durable pleating of natural **fabrics** with hydrophilic  
 dihalogenotriazines and crosslinking aids)  
 RN 16013-46-0 HCA  
 CN Benzenesulfonic acid, 2,2'-(1,2-ethenediyl)bis[5-[(4,6-dichloro-  
 1,3,5-triazin-2-yl)amino]- (9CI) (CA INDEX NAME)



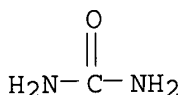
IC ICM D06M013-358  
 ICS D06B001-00; D06J001-12; D06M101-02  
 CC 40-9 (Textiles and Fibers)  
 ST pleating natural **fabric** hydrophilic dihalogenotriazine  
 crosslinking aid; dichlorohydroxytriazine sodium alginate pleating  
**cotton textile**  
 IT **Textiles**  
 (cotton; durable pleating of natural **fabrics**  
 with hydrophilic dihalogenotriazines and crosslinking aids)  
 IT Gelatins, uses  
 (crosslinking aid; durable pleating of natural **fabrics**  
 with hydrophilic dihalogenotriazines and crosslinking aids)  
 IT Monosaccharides  
 Polysaccharides, uses  
 Proteins  
 (crosslinking aids; durable pleating of natural **fabrics**  
 with hydrophilic dihalogenotriazines and crosslinking aids)  
 IT Crosslinking agents  
 (durable pleating of natural **fabrics** with hydrophilic  
 dihalogenotriazines and crosslinking aids)  
 IT Acetate **fibers**, processes  
**Rayon**, processes  
 (fabrics; durable pleating of natural **fabrics**  
 with hydrophilic dihalogenotriazines and crosslinking aids)

- IT **Textiles**  
(hemp; durable pleating of natural **fabrics** with hydrophilic dihalogenotriazines and crosslinking aids)
- IT **Fabric finishing**  
(pleating; durable pleating of natural **fabrics** with hydrophilic dihalogenotriazines and crosslinking aids)
- IT **Amines, uses**  
(polyamines, nonpolymeric, crosslinking aids; durable pleating of natural **fabrics** with hydrophilic dihalogenotriazines and crosslinking aids)
- IT **Alcohols, uses**  
(polyhydric, crosslinking aids; durable pleating of natural **fabrics** with hydrophilic dihalogenotriazines and crosslinking aids)
- IT **Phenols, uses**  
(polyphenols, nonpolymeric, crosslinking aids; durable pleating of natural **fabrics** with hydrophilic dihalogenotriazines and crosslinking aids)
- IT **Rayon, processes**  
(reconstituted, **fabric**, Lyocell; durable pleating of natural **fabrics** with hydrophilic dihalogenotriazines and crosslinking aids)
- IT **Textiles**  
(silk; durable pleating of natural **fabrics** with hydrophilic dihalogenotriazines and crosslinking aids)
- IT **Textiles**  
(wool; durable pleating of natural **fabrics** with hydrophilic dihalogenotriazines and crosslinking aids)
- IT 9000-40-2, Locust bean gum 9005-38-3, Sodium alginate  
(crosslinking aid; durable pleating of natural **fabrics** with hydrophilic dihalogenotriazines and crosslinking aids)
- IT 57-13-6, **Urea**, uses  
(crosslinking aids; durable pleating of natural **fabrics** with hydrophilic dihalogenotriazines and crosslinking aids)
- IT 2736-18-7, 2,6-Dichloro-4-hydroxy-s-triazine sodium salt  
16013-46-0  
(durable pleating of natural **fabrics** with hydrophilic dihalogenotriazines and crosslinking aids)

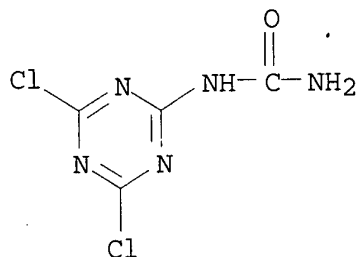
L60 ANSWER 2 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 138:171761 Manufacture of **cellulose fiber** materials with good shape retention and functionality. Yamada, Eiji (Kanehisa K. K., Japan). Jpn. Kokai Tokkyo Koho JP 2003049362 A2 20030221, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-268018 20010801.

AB The materials are manufd. by reacting **cellulose fiber** materials with hydrophilic di-halogeno-s-triazines and then or while reacting with polyhydric alcs. and/or polyfunctional amino compds. Thus, a Tencel-polyurethane blend **fabric** was padded in a soln. contg. 2,6-dichloro-4-carbamoylamino-s-triazine, steam-heated, padded in a glycerin soln., steamed, and processed to give a **fabric** showing good dimensional

stability after washing.  
 IT 57-13-6, Urea, uses 39003-43-5  
 (cellulose fabrics processed with hydrophilic  
 dihalogenotriazines and polyols and/or polyamines for shape  
 retention and functionality)  
 RN 57-13-6 HCA  
 CN Urea (8CI, 9CI) (CA INDEX NAME)



RN 39003-43-5 HCA  
 CN Urea, (4,6-dichloro-1,3,5-triazin-2-yl)- (9CI) (CA INDEX NAME)



IC ICM D06M013-358  
 ICS D06M101-04; D06M101-06  
 CC 40-9 (Textiles and Fibers)  
 ST cellulose fabric processing hydrophilic  
 dihalogenotriazine polyol polyamine; dichlorocarbamoylaminotriazine  
 glycerin processing rayon polyurethane textile  
 IT Fabric finishing  
 (cellulose fabrics processed with hydrophilic  
 dihalogenotriazines and polyols and/or polyamines for shape  
 retention and functionality)  
 IT Monosaccharides  
 Polysaccharides, uses  
 (cellulose fabrics processed with hydrophilic  
 dihalogenotriazines and polyols and/or polyamines for shape  
 retention and functionality)  
 IT Fibers  
 (cellulosic, fabrics; cellulose  
 fabrics processed with hydrophilic dihalogenotriazines  
 and polyols and/or polyamines for shape retention and  
 functionality)  
 IT Textiles  
 (cotton; cellulose fabrics  
 processed with hydrophilic dihalogenotriazines and polyols and/or  
 polyamines for shape retention and functionality)  
 IT Rayon, uses

- (**fabrics; cellulose fabrics** processed with hydrophilic dihalogenotriazines and polyols and/or polyamines for shape retention and functionality)
- IT **Textiles**  
(**hemp; cellulose fabrics** processed with hydrophilic dihalogenotriazines and polyols and/or polyamines for shape retention and functionality)
- IT Amines, uses  
(polyamines, nonpolymeric; **cellulose fabrics** processed with hydrophilic dihalogenotriazines and polyols and/or polyamines for shape retention and functionality)
- IT Alcohols, uses  
(polyhydric; **cellulose fabrics** processed with hydrophilic dihalogenotriazines and polyols and/or polyamines for shape retention and functionality)
- IT Phenols, uses  
(polyphenols, nonpolymeric; **cellulose fabrics** processed with hydrophilic dihalogenotriazines and polyols and/or polyamines for shape retention and functionality)
- IT Polyurethane **fibers**  
(**rayon blends, fabric; cellulose fabrics** processed with hydrophilic dihalogenotriazines and polyols and/or polyamines for shape retention and functionality)
- IT **Textiles**  
(**rayon-polyurethane blend; cellulose fabrics** processed with hydrophilic dihalogenotriazines and polyols and/or polyamines for shape retention and functionality)
- IT **Rayon**, uses  
(reconstituted, **fabric**, Lyocell, Tencel; **cellulose fabrics** processed with hydrophilic dihalogenotriazines and polyols and/or polyamines for shape retention and functionality)
- IT 56-81-5, Glycerin, uses 57-13-6, **Urea**, uses 111-42-2, Diethanolamine, uses 2736-18-7 39003-43-5  
(**cellulose fabrics** processed with hydrophilic dihalogenotriazines and polyols and/or polyamines for shape retention and functionality)

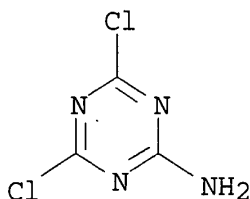
L60 ANSWER 3 OF 42 HCA COPYRIGHT 2003 ACS on STN

136:218322 New disazo direct dyes. Wojciechowski, Krzysztof (Katedra Barwnikow, Politech. Lodzka, Lodz, Pol.). Zeszyty Naukowe Politechniki Slaskiej, Chemia, 142, 253-258 (Polish) 2001. CODEN: ZNSCAM. ISSN: 0372-9494. Publisher: Wydawnictwo Politechniki Slaskiej.

AB Disazo direct dyes with independent chromophoric systems were obtained using phosgene and cyanuryl chloride as coupling links. Application of cyanuryl chloride creates possibilities of prepg. dyes with mixed colors. As chromophoric systems sulfoaminoazobenzene (A) and phenylazo-I acid were utilized. The acylation of A by phosgene causes hypsochromic shift of

.DELTA..lambda.max = 3 nm, and cyanuryl chloride - 30 nm. The acylation of phenylazo-I acid produces bathochromic shifts, resp., 13 and 10 nm, with respect to corresponding monoazo dyes used as std..

IT 933-20-0, 2-Amino-4,6-dichloro-s-triazine  
(linking agent; prepn. and UV spectra of disazo direct dyes)  
RN 933-20-0 HCA  
CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
Section cross-reference(s): 40  
IT Textiles  
(cotton; prepn. and UV spectra of disazo direct dyes for)  
IT 75-44-5, Phosgene 933-20-0, 2-Amino-4,6-dichloro-s-triazine  
(linking agent; prepn. and UV spectra of disazo direct dyes)

L60 ANSWER 4 OF 42 HCA COPYRIGHT 2003 ACS on STN

136:218256 The effect of crosslinking agents and reactive dyes on the fibrillation of lyocell. Karypidis, M.; Wilding, M. A.; Carr, C. M.; Lewis, D. M. (The University of Science and Technology in Manchester (UMIST), UK). AATCC Review, 1(8), 40-44 (English) 2001. CODEN: ARAEBW. ISSN: 1532-8813. Publisher: American Association of Textile Chemists and Colorists.

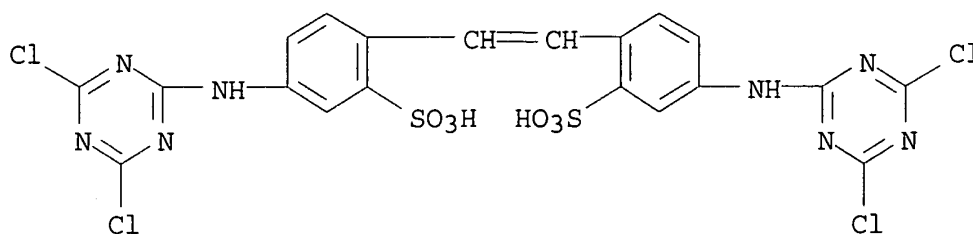
AB A yarn-on-yarn abrasion test method has been developed that is capable of effectively monitoring the wet abrasion of lyocell fibers. The test system is sensitive to the effect of reactive dyes and colorless crosslinkers. Improvements in wet abrasion performance were obsd. with bifunctional and tri-functional dyes, contrasting with the relatively ineffective non-crosslinking mono-functional dye. Colorless crosslinkers similarly improved the wet abrasion. Under the exptl. conditions used in this study, the dry yarn-on-yarn breakdown of the lyocell appeared to occur by a different mechanism than the wet abrasion. In contrast to the beneficial effect of crosslinking on the wet abrasion, the most effective "wet" crosslinker had a deleterious effect on dry abrasion, while the less effective "wet" crosslinkers had less impact on dry abrasion resistance.

IT 16013-46-0 52610-09-0 98638-51-8  
(crosslinker; effect of crosslinking agents and reactive dyes on

**fibrillation** of lyocell)

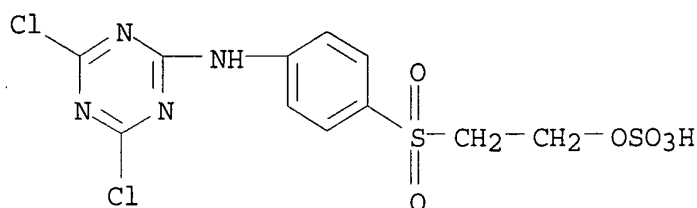
RN 16013-46-0 HCA

CN Benzenesulfonic acid, 2,2'-(1,2-ethenediyl)bis[5-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]- (9CI) (CA INDEX NAME)



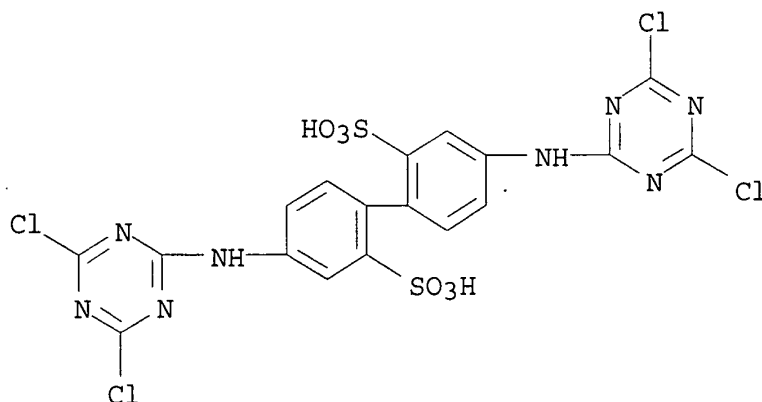
RN 52610-09-0 HCA

CN Ethanol, 2-[[4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]phenyl]sulfonyl]-, hydrogen sulfate (ester) (9CI) (CA INDEX NAME)



RN 98638-51-8 HCA

CN [1,1'-Biphenyl]-2,2'-disulfonic acid, 4,4'-bis[(4,6-dichloro-1,3,5-triazin-2-yl)amino]- (9CI) (CA INDEX NAME)



CC 40-10 (Textiles and Fibers)

Section cross-reference(s): 43

ST **fibrillation** lyocell crosslinking agent reactive dye;  
reconstituted **rayon fibrillation** crosslinking

- agent reactive dye
- IT Creaseproofing  
(agents; effect of crosslinking agents and reactive dyes on **fibrillation** of lyocell)
- IT Abrasion  
(dry and wet; effect of crosslinking agents and reactive dyes on **fibrillation** of lyocell)
- IT Creaseproofing  
Crosslinking agents  
Reactive dyes  
(effect of crosslinking agents and reactive dyes on **fibrillation** of lyocell)
- IT Polymer morphology  
(**fibrillar**; effect of crosslinking agents and reactive dyes on **fibrillation** of lyocell)
- IT Rayon, properties  
(reconstituted; effect of crosslinking agents and reactive dyes on **fibrillation** of lyocell)
- IT 1854-26-8, Dimethyloldihydroxyethylene urea  
(creaseproofing agent; effect of crosslinking agents and reactive dyes on **fibrillation** of lyocell)
- IT 16013-46-0 52610-09-0 98638-51-8  
130519-09-4 247019-50-7  
(crosslinker; effect of crosslinking agents and reactive dyes on **fibrillation** of lyocell)
- IT 17095-24-8, C.I. Reactive Black 5 140876-11-5, C.I. Reactive Red 228 140876-14-8, C.I. Reactive Yellow 168  
(effect of crosslinking agents and reactive dyes on **fibrillation** of lyocell)

L60 ANSWER 5 OF 42 HCA COPYRIGHT 2003 ACS on STN

135:154058 Shape stabilization agents for organic natural materials comprising aqueous dispersions of pulverized 2,4,6-trihalogeno-1,3,5-triazines or their derivatives and finishing the materials with the agents with reduced environment pollution. Yamada, Eiji (Kanehisa K. K., Japan). Jpn. Kokai Tokkyo Koho JP 2001214369 A2 20010807, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-62699 20000201.

AB The stabilization agents (A) comprise aq. dispersions contg. particulate 2,4,6-trihalogeno-1,2,5-triazines (A) or derivs. of A formed by pulverizing A or A derivs. in a pulverizing machine to form particles with diam. less than micron units. Org. natural materials (e.g., **cotton, flax, rayon**, wool, silk, feather, leather, paper, wood, sawdust, nonwoven **fabrics**, or activated clays) are treated with A for stabilization of the shape of the materials. Cyanuric chloride (I) powder 30, naphthalenesulfonic acid-**formaldehyde** condensate 10, and H<sub>2</sub>O 60 g were mixed in an impeller-type stirring machine for .apprx.10 h at 1000 rpm to give I particles with diam. .ltoreq.0.1 .mu.m. Silk **yarns** were treated with an aq. dispersion contg. 10% (on **fiber**) I and Na<sub>2</sub>CO<sub>3</sub> at pH 9-11 for 45 min at 60-65.degree., washed, and dried. A **woven**

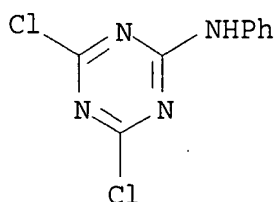
**fabric** of the **yarns** showed shrinkage 1.5% on washing the **fabric** for 10 cycles.

IT 2272-40-4, 2-Anilino-4,6-dichloro-1,3,5-triazine  
13734-08-2 49812-79-5 55635-96-6

(Shape stabilization agents for org. natural materials comprising aq. dispersions of pulverized 2,4,6-trihalogeno-1,3,5-triazines or their derivs. and finishing the materials with the agents with reduced environment pollution)

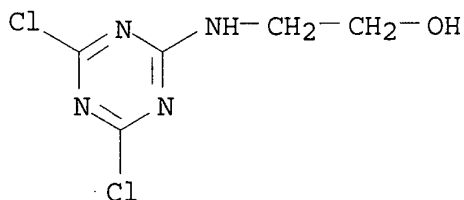
RN 2272-40-4 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro-N-phenyl- (9CI) (CA INDEX NAME)



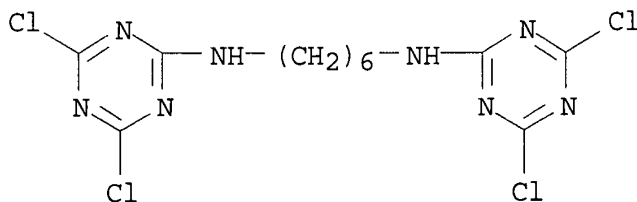
RN 13734-08-2 HCA

CN Ethanol, 2-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]- (9CI) (CA INDEX NAME)



RN 49812-79-5 HCA

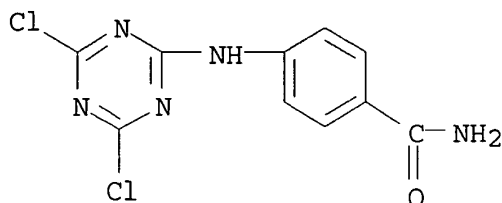
CN 1,6-Hexanediamine, N,N'-bis(4,6-dichloro-1,3,5-triazin-2-yl)- (9CI) (CA INDEX NAME)



RN 55635-96-6 HCA

CN Benzamide, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]- (9CI) (CA INDEX NAME)





- IC ICM D06M013-358  
ICS D06M101-06; D06M101-10
- CC **40-9** (Textiles and Fibers)  
Section cross-reference(s): 43
- ST cyanuric chloride pulverized shrinkproofing agent silk; triazine halogeno deriv pulverized shrinkproofing agent wool; **cotton fabric** creaseproofing agent pulverized halogenotriazine deriv
- IT Environmental pollution control  
**Fabric** finishing  
Feather  
Leather  
Nonwoven **fabrics**  
Paper  
Pulverization  
Sawdust  
Wood  
(Shape stabilization agents for org. natural materials comprising aq. dispersions of pulverized 2,4,6-trihalogeno-1,3,5-triazines or their derivs. and finishing the materials with the agents with reduced environment pollution)
- IT Creaseproofing  
Shrinkproofing (**textiles**)  
(agents; Shape stabilization agents for org. natural materials comprising aq. dispersions of pulverized 2,4,6-trihalogeno-1,3,5-triazines or their derivs. and finishing the materials with the agents with reduced environment pollution)
- IT **Textiles**  
(**cotton**; Shape stabilization agents for org. natural materials comprising aq. dispersions of pulverized 2,4,6-trihalogeno-1,3,5-triazines or their derivs. and finishing the materials with the agents with reduced environment pollution)
- IT **Rayon**, uses  
(**fabrics**; Shape stabilization agents for org. natural materials comprising aq. dispersions of pulverized 2,4,6-trihalogeno-1,3,5-triazines or their derivs. and finishing the materials with the agents with reduced environment pollution)
- IT **Textiles**  
(silk; Shape stabilization agents for org. natural materials comprising aq. dispersions of pulverized 2,4,6-trihalogeno-1,3,5-triazines or their derivs. and finishing the materials with the agents with reduced environment pollution)

IT **Textiles**

(wool; Shape stabilization agents for org. natural materials comprising aq. dispersions of pulverized 2,4,6-trihalogeno-1,3,5-triazines or their derivs. and finishing the materials with the agents with reduced environment pollution)

IT 108-77-0, Cyanuric chloride 2272-40-4,

2-Anilino-4,6-dichloro-1,3,5-triazine 4682-78-4,

2-Phenoxy-4,6-dichloro-1,3,5-triazine 13734-08-2

49679-32-5 49812-79-5 55635-96-6 352675-58-2

(Shape stabilization agents for org. natural materials comprising aq. dispersions of pulverized 2,4,6-trihalogeno-1,3,5-triazines or their derivs. and finishing the materials with the agents with reduced environment pollution)

L60 ANSWER 6 OF 42 HCA COPYRIGHT 2003 ACS on STN

132:209138 Studies on synthesis of some novel reactive dyes and their application on various **fibres**. Patel, M. S.; Patel, S. K.; Patel, K. C. (Department of Chemistry, South Gujrat University, Surat, 395 007, India). Acta Ciencia Indica, Chemistry, 24(1), 27-32 (English) 1998. CODEN: ACICDV. ISSN: 0253-7338. Publisher: Pragati Prakashan.

AB Ten reactive disazo dyes have been prepd. by 1:2 coupling of tetrazotized 4,4'-methylenebis(o-chloroaniline) with 10 different cyanurated (dichlorotriazinylated) coupling components (H-acid, Schaeffer's acid, K-acid, J-acid, R-acid, Bronner acid, G-acid, N-methyl-J-acid, N-phenyl-J-acid, and gamma acid) and their dyeing performance as reactive dyes has been assessed on viscose **rayon**, wool, and silk **fibers**.

IT 5161-56-8 17752-63-5, Disodium

4-(4,6-dichloro-1,3,5-triazin-2-ylamino)-5-hydroxy-2,7-

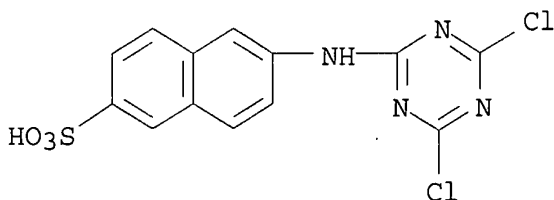
naphthalenedisulfonate 53680-76-5 59922-07-5

260401-09-0 260401-18-1 260401-20-5

(coupling component; prepn. of disazo reactive dyes from cyanurated coupling components)

RN 5161-56-8 HCA

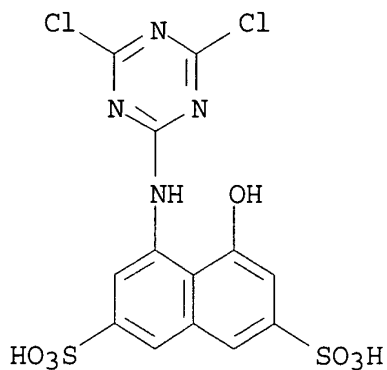
CN 2-Naphthalenesulfonic acid, 6-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 17752-63-5 HCA

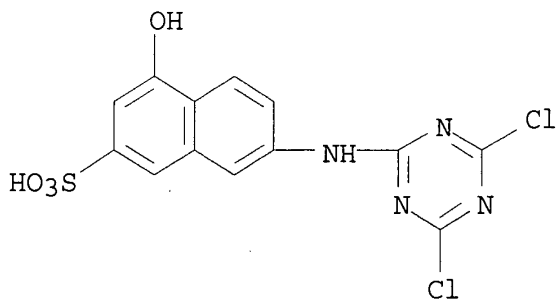
CN 2,7-Naphthalenedisulfonic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-5-hydroxy-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 53680-76-5 HCA

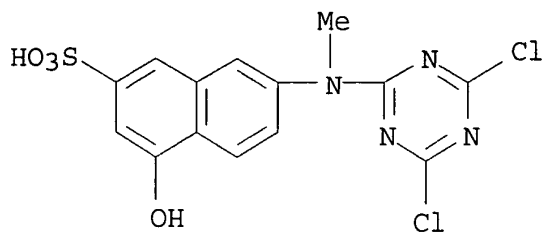
CN 2-Naphthalenesulfonic acid, 7-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-4-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 59922-07-5 HCA

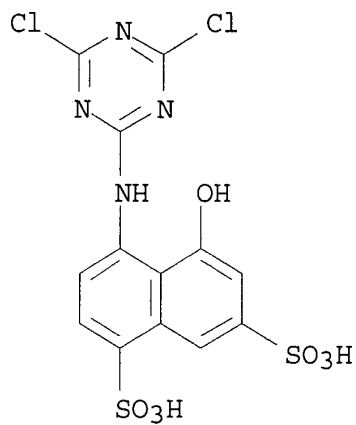
CN 2-Naphthalenesulfonic acid, 7-[(4,6-dichloro-1,3,5-triazin-2-yl)methylamino]-4-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 260401-09-0 HCA

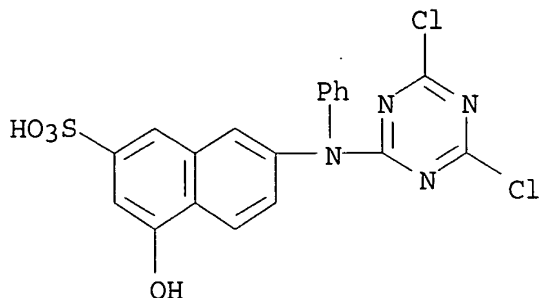
CN 1,7-Naphthalenedisulfonic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-5-hydroxy-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

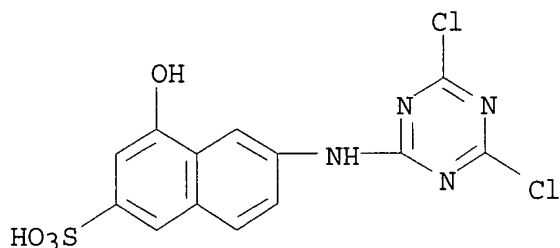
RN 260401-18-1 HCA

CN 2-Naphthalenesulfonic acid, 7-[(4,6-dichloro-1,3,5-triazin-2-yl)phenylamino]-4-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

RN 260401-20-5 HCA  
 CN 2-Naphthalenesulfonic acid, 6-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-4-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



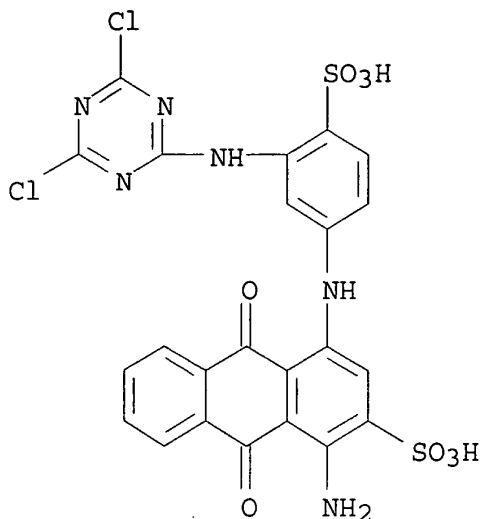
● Na

IT 50-00-0, **Formaldehyde**, reactions  
 (tetrazo component starting material; prepn. of disazo reactive  
 dyes from cyanurated coupling components)  
 RN 50-00-0 HCA  
 CN Formaldehyde (8CI, 9CI) (CA INDEX NAME)

$\text{H}_2\text{C}=\text{O}$

CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)  
 Section cross-reference(s): 40  
 IT **Rayon**, processes  
 (fabrics; reactive dyeing with disazo reactive dyes  
 prepd. from cyanurated coupling components)  
 IT Reactive dyeing

- (of rayon, wool and silk with disazo reactive dyes prep'd. from cyanurated coupling components)
- IT **Textiles**  
(silk; reactive dyeing with disazo reactive dyes prep'd. from cyanurated coupling components)
- IT **Textiles**  
(wool; reactive dyeing with disazo reactive dyes prep'd. from cyanurated coupling components)
- IT **5161-56-8 17752-63-5, Disodium**  
4-(4,6-dichloro-1,3,5-triazin-2-ylamino)-5-hydroxy-2,7-naphthalenedisulfonate **53680-76-5 59922-07-5**  
260401-07-8 260401-09-0 260401-12-5 260401-15-8  
260401-18-1 260401-20-5  
(coupling component; prepn. of disazo reactive dyes from cyanurated coupling components)
- IT **50-00-0, Formaldehyde, reactions 95-51-2**  
(tetrazo component starting material; prepn. of disazo reactive dyes from cyanurated coupling components)
- L60 ANSWER 7 OF 42 HCA COPYRIGHT 2003 ACS on STN
- 130:353612 **Hemp** mats and a production technology for. Wang, Xuewu; Li, Jiasheng; Cheng, Jiazhong; Zhong, Yihua; Wang, Qingfu (Hemp Textile Mill, Taierzhuang Dist., Zaozhuang City, Peop. Rep. China). Faming Zhuanli Shenqing Gongkai Shuomingshu CN 1116255 A 19960207, 7 pp. (Chinese). CODEN: CNXXEV. APPLICATION: CN 1994-110716 19940726.
- AB A posttreatment for mats comprises boiling the mats in solns. contg. NaOH 10-15, Na<sub>2</sub>CO<sub>3</sub> 0.3-0.7, Na<sub>3</sub>PO<sub>4</sub> 0.5- 0.7, and a detergent 5-10 g/L, immersing and bleaching in a soln. contg. active Cl for 0.5 h at pH 9-10.5, naturally oxidizing for 20 min, washing with water, dewatering, treating with acid (H<sub>2</sub>SO<sub>4</sub> or HCl) for 3-5 min, washing, soaking in an alkali (Na<sub>2</sub>CO<sub>3</sub> for pH 7.5-8 or 0.3-0.5 g/L Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>.5H<sub>2</sub>O) for 3-5 min, washing, dewatering, and pressing. The bath ratio of mats and water in the boiling process is 1:45-47. The content of the active Cl is 0.9 g/L in the summer and 1 g/L in the winter, and pH is 9.5-10. The mats are dyed before pressing with reactive dyes such as X-3B Red, X-BR Blue, X-GN Orange.
- IT **13324-20-4, Reactive Brilliant Blue X-BR**  
(cooking and bleaching and dyeing in manuf. of **hemp** mats)
- RN 13324-20-4 HCA
- CN 2-Anthracenesulfonic acid, 1-amino-4-[[3-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-4-sulfophenyl]amino]-9,10-dihydro-9,10-dioxo-(9CI) (CA INDEX NAME)



- IC ICM D04G005-00  
ICS D01C001-02; D01G001-06; D02H011-00  
CC 40-10 (Textiles and Fibers)  
ST **hemp** mat posttreatment prodn; dyeing cooking bleaching  
**hemp** mat  
IT Bleaching  
Detergents  
Mats  
Reactive dyes  
(cooking and bleaching and dyeing in manuf. of **hemp** mats)  
IT Cannabis sativa  
(**fiber**; cooking and bleaching and dyeing in manuf. of **hemp** mats)  
IT 17804-49-8  
(Reactive X 3B Red; cooking and bleaching and dyeing in manuf. of **hemp** mats)  
IT 7782-50-5, Chlorine, reactions  
(cooking and bleaching and dyeing in manuf. of **hemp** mats)  
IT 497-19-8, Sodium carbonate, uses 1310-73-2, Sodium hydroxide, uses 6522-74-3, Reactive Brilliant Orange X-GN 7601-54-9, Sodium **phosphate** 7647-01-0, Hydrochloric acid, uses 7664-93-9, Sulfuric acid, uses 7772-98-7, Sodium thiosulfate 13324-20-4, Reactive Brilliant Blue X-BR  
(cooking and bleaching and dyeing in manuf. of **hemp** mats)

L60 ANSWER 8 OF 42 HCA COPYRIGHT 2003 ACS on STN  
130:297854 The use of a crosslinking agent to achieve covalent fixation of hydroxyethyl sulfone dyes on **cotton**. Lewis, David M.; Yao, J. (Department of Colour Chemistry & Dyeing, University of

Leeds, Leeds, LS2 9JT, UK). Book of Papers - International Conference & Exhibition, AATCC 375-383 (English) 1998. CODEN: BPIAEQ. ISSN: 0892-2713. Publisher: American Association of Textile Chemists and Colorists.

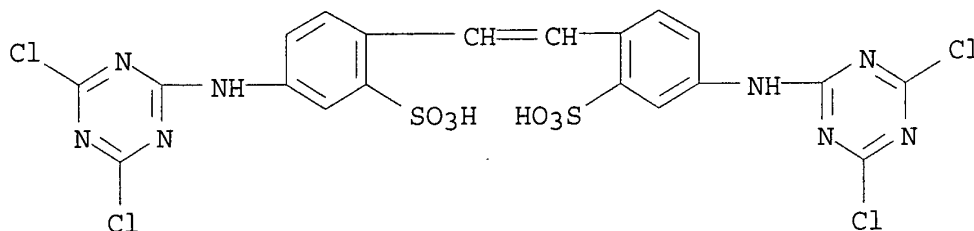
AB The use of N,N'-bis(dichloro-s-triazinyl)-4,4'-diaminostilbene-2,2'-disodiiodisulfonate (T-DAS) as a crosslinking agent in dyeing process of **cotton** using hydrolyzed Remazol Black B (HBB) is investigated. To fix HBB (2% o.m.f), optimally the bath should contain T-DAS (4% o.m.f) and sodium sulfate (5 g/l), and the procedure run at 25.degree.: fixation is achieved using trisodium **phosphate** (TSP) (20 g/l) at 40.degree..

IT 26464-76-6

(crosslinking agent; use of a crosslinking agent to achieve covalent fixation of hydroxyethylsulfone dyes on **cotton**)

RN 26464-76-6 HCA

CN Benzenesulfonic acid, 2,2'-(1,2-ethenediyl)bis[5-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

CC 40-7 (Textiles and Fibers)

Section cross-reference(s): 41

ST crosslinking agent fixation hydroxyethylsulfone dye **cotton**

IT **Textiles**

(**cotton**; use of a crosslinking agent to achieve covalent fixation of hydroxyethylsulfone dyes on **cotton**)

IT Crosslinking agents

(use of a crosslinking agent to achieve covalent fixation of hydroxyethylsulfone dyes on **cotton**)

IT 7601-54-9, Trisodium **phosphate** 7757-82-6, Sodium sulfate, uses

(additive; use of a crosslinking agent to achieve covalent fixation of hydroxyethylsulfone dyes on **cotton**)

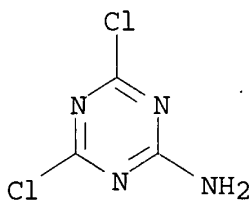
IT 26464-76-6

(crosslinking agent; use of a crosslinking agent to achieve covalent fixation of hydroxyethylsulfone dyes on **cotton**)

IT 100556-81-8

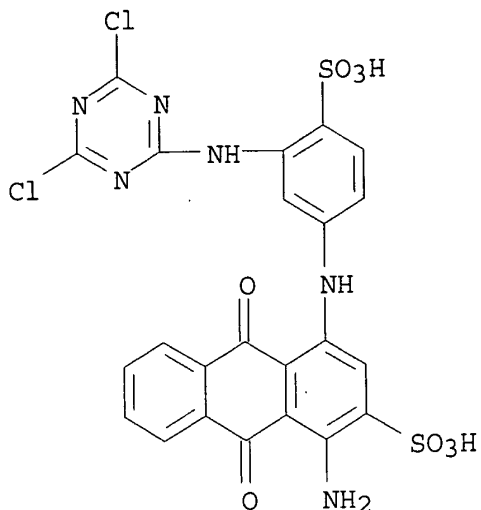


- (dye; use of a crosslinking agent to achieve covalent fixation of hydroxyethylsulfone dyes on **cotton**)
- IT 17095-24-8, Remazol Black B  
(hydrolysis of; use of a crosslinking agent to achieve covalent fixation of hydroxyethylsulfone dyes on **cotton**)
- IT 108-77-0, Cyanuric chloride 7336-20-1, 4,4'-Diamino-2,2'-stilbenedisulfonic acid disodium salt  
(starting material; use of a crosslinking agent to achieve covalent fixation of hydroxyethylsulfone dyes on **cotton**)
- L60 ANSWER 9 OF 42 HCA COPYRIGHT 2003 ACS on STN  
122:33454 New auxiliaries for the dye-resist treatment of wool in wool-**linen** blends (AiF - Nr. 8712). Haarer, Jutta; Hoecker, Hartwig (Dtsch. Wollforschungsinstit. der TH Aachen e.V., Germany). DWI Reports, 113, XXXVIII,479-84 (German) 1994. CODEN: DWIREC. ISSN: 0942-301X.
- AB Two dye-resist auxiliaries for preventing the bleeding of **cellulosic** dyes onto wool were prepd. and evaluated for their effectiveness against the **cellulosic** dye Procion Blue MX 2G. Finishing the wool component with the reactive auxiliaries succeeded in producing a good resist effect and made it possible to achieve a better tone-on-tone dyeing with wool-**linen** blends. The degree of the resisting action and, therefore, the strength of the desired hue could be varied by changing the amt. of auxiliary applied to the fiber. A max. resist effect was obtained with an auxiliary content of 1.8% on Hercosett-finished wool, whereas with untreated merino wool the max. effect was obtained with 0.5% auxiliary.
- IT 933-20-0D, 4,6-Dichloro-2-aminotriazine, derivs.  
(dye-resist auxiliary; for dyeing of wool-**linen** blends with fiber-reactive dyes)
- RN 933-20-0 HCA  
CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



- CC 40-6 (Textiles and Fibers)  
ST dye resist auxiliary wool **linen**; dyeing wool **linen**  
textile resist  
IT Shrinkproofing  
(Hercosett; auxiliaries for the dye-resist treatment of shrinkproofed wool in dyeing of wool-**linen** blends with fiber-reactive dyes)  
IT Dyeing

- (auxiliaries for the dye-resist treatment of wool in dyeing of wool-**linen** blends with fiber-reactive dyes)
- IT Textiles  
(**linen**-wool, auxiliaries for the dye-resist treatment of wool in dyeing of wool-**linen** blends with fiber-reactive dyes)
- IT 933-20-0D, 4,6-Dichloro-2-aminotriazine, derivs.  
30605-57-3D, Naphthalenesulfonic acid, amino-, monosodium salt, derivs. 160016-50-2  
(dye-resist auxiliary; for dyeing of wool-**linen** blends with fiber-reactive dyes)
- L60 ANSWER 10 OF 42 HCA COPYRIGHT 2003 ACS on STN
- 119:137010 Functional differences of dyes in inducing respiratory immunogenicity by azo-, thiazole-, quinoline-, reactive-, and naphthol-dye-inactivated Sendai viruses. Miyamae, Takeo (Sch. Health Sci., Fujita Health Univ., Aichi, 470-11, Japan). Microbiology and Immunology, 37(3), 213-20 (English) 1993. CODEN: MIIMDV. ISSN: 0385-5600.
- AB The prophylactic effects by mouse nasal inoculation of 31 kinds of org. dye-inactivated Sendai viruses were investigated by contact exposure expt. that used mouse nasally infected with 105.8 EID50, immunofluorescent examn. of the entire respiratory tract, and check of rise of serum HI titer postexposure. The relative merits of the dye-structures for inciting nasal immunogenicity were detd. Of 14 azo-dye-inactivated vaccines, only azo blue- and amido black 10B treated ones brought about nearly complete protection, while the other 5 dye-groups provided partial protection and the remaining 7 dye-groups the least protection. Of 6 thiazole dye-vaccines, primuline-, thioflavine S-, and thioflavine T-vaccines induced complete or almost complete protection, and the others moderate or the least protection. With 3 quinoline-vaccines, both pinacyanol- and quinaldine red-inactivated ones provided complete protection, but not with quinoline blue-vaccine. Of 4 reactive dye-vaccines, both cibacron brilliant yellow 3G-P- and reactive blue 4-treated ones brought about nearly complete protection, but the remaining 2 vaccines induced regional infection. Nevertheless, all 4 naphthol group (AS, AS-BS, AS-BI, and AS-MX)-treated vaccines yielded complete or almost complete protection. The 13 most effective vaccine groups suppressed marked rise of high or low serum HI titers developed through nasal vaccination postexposure. In short, specified dyestuffs having a great affinity for **cellulosic fibers**, evidently incited mucosal immunogenicity, probably by major union of the dyes to viral core ribose.
- IT 13324-20-4, Reactive blue 4  
(Sendai virus inactivated by, prophylactic activity of, in respiratory tract, functional differences in other dyes in relation to)
- RN 13324-20-4 HCA
- CN 2-Anthracenesulfonic acid, 1-amino-4-[[3-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-4-sulfophenyl]amino]-9,10-dihydro-9,10-dioxo-(9CI) (CA INDEX NAME)



CC 15-2 (Immunochemistry)  
 IT 92-75-1, Naphthol As-MX 117-92-0 314-13-6, Evans blue 523-42-2  
 573-58-0, Congo red 605-91-4, Pinacyanol 992-59-6, Benzopurpurin  
 4B 1064-48-8, Amido black 10B 1163-67-3, Naphthol AS acetate  
 1326-12-1, Thioflavine S 1829-00-1, Titan yellow 1919-91-1,  
 Naphthol AS-BI **phosphate** 1937-37-7, Chlorazol black E  
 2150-33-6, Thiazine red R 2390-54-7, Thioflavine T 2602-46-2,  
 Direct blue 2B 2610-05-1, Brilliant blue 6B 3051-11-4, Brilliant  
 Yellow 3567-66-6, Azofuchsin 4196-99-0, Biebrich scarlet  
 4197-07-3, Chromotrope 2R 4618-88-6, Janus green 6420-06-0, Azo  
 blue 7059-96-3 8003-84-7, Geranine G 8005-77-4, C.I. Basic  
 Brown 1 8064-60-6, Primuline 12236-82-7 **13324-20-4**,  
 Reactive blue 4 17681-50-4, Cibacron brilliant red 3B-A  
 50662-99-2, Cibacron brilliant yellow 3G-P  
 (Sendai virus inactivated by, prophylactic activity of, in  
 respiratory tract, functional differences in other dyes in  
 relation to)

L60 ANSWER 11 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 118:193592 Permanently stain resistant **textile fibers**  
 . Sargent, Ralph Richard; Williams, Michael S. (Peach State Labs,  
 Inc., USA). PCT Int. Appl. WO 9218332 A1 19921029, 25 pp.  
 DESIGNATED STATES: W: AU, CA, JP; RW: AT, BE, CH, DE, DK, ES, FR,  
 GB, GR, IT, LU, MC, NL, SE. (English). CODEN: PIXXD2.  
 APPLICATION: WO 1992-US2827 19920407. PRIORITY: US 1991-685480  
 19910412.

AB The title **fibers** comprise a **fiber** with structure  
**fiber-A(Y)nS** where A is an arom., heteroarom., an aliph.  
 moiety that optionally contains side groups other than Y that may  
 not react with the **fiber** or the stain resist treatment; Y  
 is or contains a functional group that is covalently linked to a  
 stain resistant treatment; S is a stain resistant compn., and n is 0

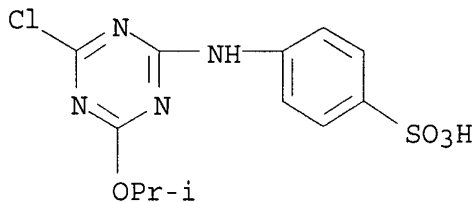
or 1. Nylon 6 dyed **fibers** were treated with a soln. of Na 4-[4-chloro-6-(1-methylethoxy)-1,3,5-triazin-2-ylamino]benzenesulfonate and then with the reaction product of methacrylic acid and 2,4-dimethylbenzenesulfonic acid-formaldehyde-4,4'-sulfonylbisphenyl copolymer in the presence of a persulfate, the **fibers** shampooed 4 times with detergent, and subjected to chlorine bleach, coffee, red wine, and cherry Kool-Aid for 24 h. None of these materials discolored the **fiber**.

IT 68413-55-8

(permanent stain resist compns. contg., for **fibers**)

RN 68413-55-8 HCA

CN Benzenesulfonic acid, 4-[[4-chloro-6-(1-methylethoxy)-1,3,5-triazin-2-yl]amino]-, monosodium salt (9CI) (CA INDEX NAME)



● Na

IC ICM B32B027-12

ICS D06M014-06; D06M014-08

CC 40-9 (Textiles and Fibers)

ST stain resist permanent **fiber**; covalent bonded stain resist **fiber**; stainproofing permanent **fiber**; polyamide **fiber** permanent stain resist; cotton permanent strain resist; wood permanent strain resist; carpet nylon permanent stain resist

IT Cotton

Wool

(permanent stainproofing of, compn. for)

IT Polyamide **fibers**, properties

(permanent stainproofing of, compn. for)

IT Polyamide **fibers**, properties

(6, permanent stainproofing of, compn. for)

IT 9011-14-7, PMMA 68413-55-8 68516-86-9

(permanent stain resist compns. contg., for **fibers**)

L60 ANSWER 12 OF 42 HCA COPYRIGHT 2003 ACS on STN

114:64248 Reactive dyes containing vinylsulfonylalkylamino groups bound to a bis(triazinylamino)benzene group. Tzikas, Athanassios (Ciba-Geigy Corp., USA). U.S. US 4925928 A 19900515, 61 pp. (English). CODEN: USXXAM. APPLICATION: US 1988-210678 19880623.

GI For diagram(s), see printed CA Issue.

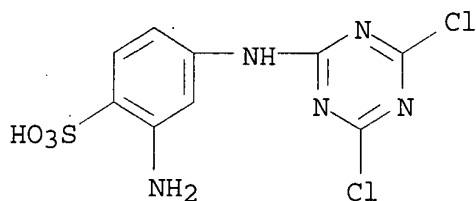
AB The title dyes I [A = amino substituent contg.  $\text{SO}_2\text{Z}$  group; Z =  $\beta$ -sulfatoethyl,  $\beta$ -thiosulfatoethyl,  $\beta$ -phosphatoethyl,  $\beta$ -acetoxyethyl,  $\beta$ -haloethyl,  $\text{CH:CH}_2$ ; G = chromophoric residue; R, R1, R2 = H, (un)substituted C1-4 alkyl; X, Y = F, Cl, Br,  $\text{SO}_3\text{H}$ , C1-4 alkylsulfonyl, phenylsulfonyl; Z1 = H, C1-4-alkyl, C1-4 alkoxy, halogen,  $\text{CO}_2\text{H}$ ,  $\text{SO}_3\text{H}$ ], useful for dyeing or printing **cellulosic fabrics**, are prepd. Thus, Na 2-(3'-aminophenyl)amino-4,6-dichloro-1,3,5-triazine-4'-sulfonate was diazotized, coupled with Na 2,6-dihydroxy-3-sulfomethyl-4-methylpyridine salt, the intermediate condensed with Na 1,3-phenylenediamine-4-sulfonate and then with cyanuric chloride, and  $\text{H}_2\text{N}(\text{CH}_2)_2\text{O}(\text{CH}_2)_2\text{SO}_2(\text{CH}_2)_2\text{Cl}\cdot\text{HCl}$  added, forming II, which dyed **cellulosic fibers** fast greenish yellow shades.

IT 41642-95-9

(coupling of diazotized, with sodium dihydroxy(sulfomethyl)methylpyridine salt)

RN 41642-95-9 HCA

CN Benzenesulfonic acid, 2-amino-4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-, monosodium salt (9CI) (CA INDEX NAME)



● Na

IC ICM C09B062-002

ICS C09B062-022; C09B062-04; D06P001-382

NCL 534618000

CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

ST reactive azo dye manuf; **textile** printing reactive azo dye; bifunctional reactive azo dye manuf

IT **Textile** printing

(on **cellulosic fibers**, bifunctional reactive dyes for)

IT Dyes, reactive

(azo, bifunctional, manuf. of, for **cellulosic fibers**)

IT Dyes, reactive

(bifunctional, manuf. of, for **cellulosic fibers**)

IT 41642-95-9

(coupling of diazotized, with sodium

dihydroxy(sulfomethyl)methylpyridine salt)

L60 ANSWER 13 OF 42 HCA COPYRIGHT 2003 ACS on STN

114:8259 Reactive acid formazan dyes. Henk, Hermann; Herd, Karl Josef; Stohr, Frank Michael (Bayer A.-G., Fed. Rep. Ger.). Eur. Pat. Appl. EP 338310 A1 19891025, 35 pp. DESIGNATED STATES: R: CH, DE, FR, GB, LI. (German). CODEN: EPXXDW. APPLICATION: EP 1989-105799 19890403. PRIORITY: DE 1988-3812698 19880416.

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

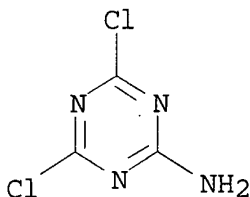
AB The title dyes I [M = divalent, metal; R = H, (un)substituted C1-4 alkyl; R1-R4 = H, C1-4 alkyl, C1-4 alkoxy, HO, halogen, CO2H, sulfonamido, NO2, alkyl- or arylcarbonylamino, alkyl- or arylsulfonylamino, SO3H, SO2CH2CH2OH, SO2CH:CH2, SO2CH2CH2Y; Y = alkali-cleavable group; X = fiber-reactive residue; Z = direct bond or bridging group to a C atom of a benzene ring; l = 1, 2; m, n, p = 0, 1; such that when n + p = 0 .gtoreq.1 of R1-R4 is SO2CH:CH2 or SO2CH2CH2Y], useful for printing or dyeing hydroxyl and amino group-contg. fabrics, are prepd. Thus, 8-hydrazino-1-(phenylsulfonyloxy)-3,6-naphthalenedisulfonic acid reacted with PhCHO forming a hydrazone, which was reacted with the reaction product of 2-amino-6-acetylaminophenol-4-sulfonic acid and CuSO4 and NaNO2, and the intermediate condensed with 2,4,6-trifluoro-5-chloropyrimidine, forming II, .lambda.max 656 nm, which dyed **cellulosic** a fast grey shade.

IT 933-20-0

(reaction of, in reactive formazan dye manuf.)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC ICM C09B062-018

ICS D06P001-38

CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 40

IT 697-83-6 933-20-0 1652-36-4 1919-43-3 6856-14-0

17601-96-6 30369-78-9 40306-75-0 72630-78-5 73570-57-7

84371-91-5 126309-65-7 126309-66-8 126309-67-9

(reaction of, in reactive formazan dye manuf.)

L60 ANSWER 14 OF 42 HCA COPYRIGHT 2003 ACS on STN

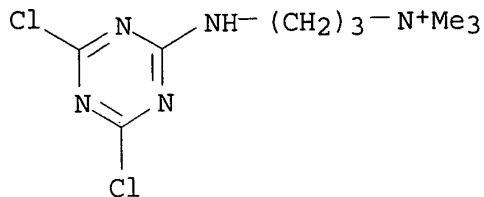
104:7137 Dyeing and printing **fibers**. Heller, Jurg; Kissling, Bruno; Robinson, Tibor; Valenti, Salvatore; Ginns, Peter; Taylor, James Martin (Sandoz A.-G., Switz.; Courtaulds PLC). Eur. Pat. Appl. EP 151370 A2 19850814, 43 pp. DESIGNATED STATES: R: AT, BE, CH, DE, FR, GB, IT, LI, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1984-810651 19841220. PRIORITY: DE 1984-3400052 19840103; DE 1984-3408639 19840309; DE 1984-3408640 19840309; DE 1984-3408642 19840309; DE 1984-3408643 19840309; GB 1984-11827 19840509.

AB **Textile fibers**, particularly **cotton**, are treated with polymeric cationic pretreatment agents to improve the color yield and wet fastness properties of subsequent dyeing or printing. The polymeric pretreatment agent may be (A) the reaction product of a monofunctional or polyfunctional amine with cyanamide, dicyandiamide, guanidine, or bisguanidine, (B) the reaction product of A with (a) an N-methylol compd., (b) an epihalohydrin, (c) **formaldehyde**, or (d) an org. compd. contg. .gtoreq.2 groups capable of being split off as anions on reaction with A or mixts. of these, or (C) a mixt. of the reaction product of A with b or with c and a, or mixts. of A with B and/or C. The pretreatment process is such that .gtoreq.0.6 wt.% of the pretreatment agent remains fixed on the **fibers**. Thus, 103 parts of diethylenetriamine was mixed with 84 parts of dicyandiamide, heated 6 h at 160.degree., allowed to solidify to a powder, dissolved in water, treated with sulfuric acid at 48-50.degree. to form the sulfate, and spray dried to give a solid powder. A 100% **cotton** knitted towelling **fabric** was immersed 10 min at 70.degree. in aq. bath contg. 2% of this powder and 0.25 mL/L of acetic acid, rinsed successively with warm then cold water to fix 0.74% of the powder on the **fabric**. **Fabric** was then dyed with a combination of yellow, red, and blue reactive dyes to provide a homogeneous navy blue shade with improved color yield, wet fastness, and stability and similar light fastness compared to a control.

IT **84167-02-2D**, reaction products with diethylenetriamine-dicyandiamide adducts  
(pretreating agents, for dyeing of **cotton**  
**textiles**)

RN 84167-02-2 HCA

CN 1-Propanaminium, 3-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-N,N,N-trimethyl-, chloride (9CI) (CA INDEX NAME)



● Cl<sup>-</sup>

- IC ICM D06P001-52  
ICS D06L003-12; D06M015-37; C08G012-40; D06P005-08  
ICA D06P003-60  
CC **40-6** (Textiles)  
ST dyeing **textile** cationic pretreating agent; polymeric cationic pretreatment agent dyeing; printing cationic pretreating agent; dicyandiamide deriv pretreating **cotton** dyeing; diethylenetriamine deriv pretreating **cotton** dyeing; cyanamide deriv pretreating **cotton** dyeing; guanidine deriv pretreating **cotton** dyeing; epihalohydrin deriv pretreating **cotton** dyeing; **formaldehyde** deriv pretreating **cotton** dyeing; amine deriv pretreating **cotton** dyeing; **cotton textile** dyeing pretreating agent  
IT Dyeing  
(of **cotton textiles** with improved color yield and wet fastness, polymeric cationic pretreatment agents for)  
IT **Textile** printing  
(on **cotton** with improved color yield and wet fastness, polymeric cationic pretreatment agents for)  
IT 106-93-4D, reaction products with diethylenetriamine-dicyandiamide adducts 111-40-0D, reaction products with dicyandiamide, sulfate salt 461-58-5D, reaction products with diethylenetriamine, sulfate salt 821-48-7D, reaction products with diethylenetriamine-dicyandiamide adducts **84167-02-2D**, reaction products with diethylenetriamine-dicyandiamide adducts  
(pretreating agents, for dyeing of **cotton textiles**)  
  
L60 ANSWER 15 OF 42 HCA COPYRIGHT 2003 ACS on STN  
103:100886 Multilayer analytical elements. (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 60010171 A2 19850119 Showa, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1983-118594 19830630.  
AB A multilayer anal. element comprising a sample developing layer; a reagent layer contg. a diazonium salt and a sulfoalkyl or sulfophenyl group-contg. polymer [CH<sub>2</sub>CR<sub>1</sub>(CONHCR<sub>2</sub>R<sub>3</sub>CH<sub>2</sub>SO<sub>3</sub>H)]<sub>n</sub> (R<sub>1</sub> = R<sub>2</sub> = H or Me, R<sub>3</sub> = C<sub>1</sub>-18 alkyl, C<sub>6</sub>-10 aryl, alkyl-substituted aryl, or C<sub>1</sub>-5 alkoxy carbonyl), and a transparent support layer is prepd.



for the detn. of fluid sample indexes, esp. amylase and bilirubin. Thus, a transparent polyethylene terephthalate (PET) film was coated with gelatin and followed by coating with the following layers in successive order: (1) basic polymer layer contg. alkali-treated gelatin, poly(N-vinylimidazole), polyoxyethylene nonylphenyl ether; (2) color-developing layer contg. 2-methoxy-5-[.beta.-(2,4-di-tert-amylphenoxy)ethoxycarbonyl]benzendiazonium tetrafluoroborate and binder .beta.-hydroxypropylmethacrylate-N-(.alpha.,.alpha.-dimethyl-.beta.-sulfoethyl)arylamide (6:4) copolymer; (3) photomasking layer contg. TiO<sub>2</sub>, p-nonylphenoxyglycerol, and gelatin; (4) coupler-substrate layer contg. starch-2-[8-hydroxy-3,6-bis(Na sulfonate)-1-naphthylamino]-4,6-dichloro-s-triazine (30:1); and (5) sample fluid-developing layer contg. PET-fiber-kapok (75:25) mixed cloth, and used as anal. element for the detn. of amylase in fluid samples, e.g. saliva. For detn. of amylase activity, saline-dild. saliva samples were spotted on the above prepd. anal. element, allowed to incubated 37.degree. for 10 min, and the colored spots measured at 550 nm.

IT 92047-60-4

(in amylase detn.)

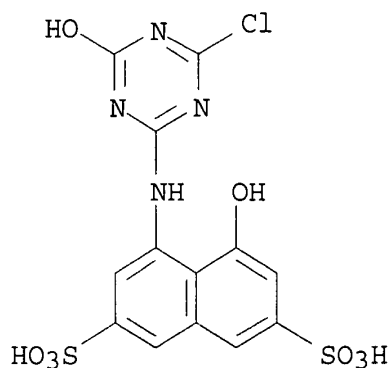
RN 92047-60-4 HCA

CN Starch, 4-chloro-6-[(8-hydroxy-3,6-disulfo-1-naphthalenyl)amino]-1,3,5-triazin-2-yl ether, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 175419-04-2

CMF C13 H9 Cl N4 O8 S2



CM 2

CRN 9005-25-8

CMF Unspecified

CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IC ICM G01N031-22

ICS B32B007-02; G01N033-50

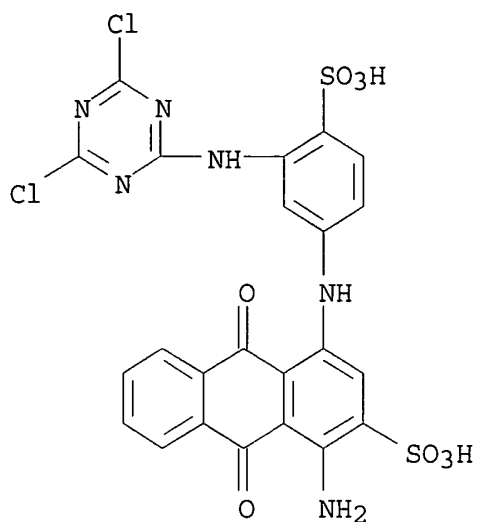
CC 7-1 (Enzymes)  
Section cross-reference(s): 9  
IT **Kapok**  
(**fibers**, polyethylene terephthalate-modified, in  
amylase detn.)  
IT Polyester **fibers**, uses and miscellaneous  
(**kapok**-modified, in amylase detn.)  
IT 9016-45-9 13463-67-7, uses and miscellaneous 25038-59-9, uses  
and miscellaneous 25232-42-2 68058-24-2 88849-60-9  
**92047-60-4** 92533-11-4  
(in amylase detn.)

L60 ANSWER 16 OF 42 HCA COPYRIGHT 2003 ACS on STN  
102:8229 A study on reactive dyes. Synthesis and application of  
bifunctional reactive dyes containing monochlorotriazinyl and  
**phosphonic** acid group. Kim, Dong Jin; Nam, Kye Chun; Park,  
Sang Woo (Div. Chem., Korea Adv. Inst. Sci. Technol., Seoul, S.  
Korea). Journal of the Korean Fiber Society, 21(4), 218-25  
(English) 1984. CODEN: HSKCDQ. ISSN: 0253-6420.

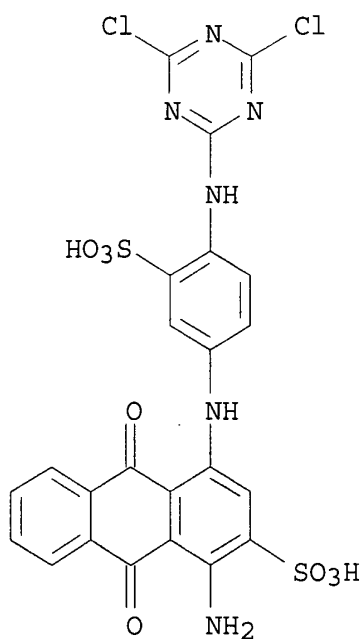
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Red I [93755-27-2], blue II (2-NH, 4-SO<sub>2</sub>H) [93755-28-3], blue II  
(4-NH, 3-SO<sub>3</sub>H) [93755-29-4], yellow III [93755-30-7], and scarlet  
IV [93755-31-8] were synthesized in 78-84% yield and were applied  
to **cotton fabric** by exhaustion under alk.  
conditions and by the thermosol method in the presence of  
dicyandiamide. All dyeings obtained by the 2 methods showed good  
color, and their fastness properties were all within com. acceptable  
limits.  
IT **13324-20-4 22356-88-3**  
(reaction of, with **aminobenzenephosphonic acid**)  
RN 13324-20-4 HCA  
CN 2-Anthracenesulfonic acid, 1-amino-4-[[3-[(4,6-dichloro-1,3,5-  
triazin-2-yl)amino]-4-sulfophenyl]amino]-9,10-dihydro-9,10-dioxo-  
(9CI) (CA INDEX NAME)

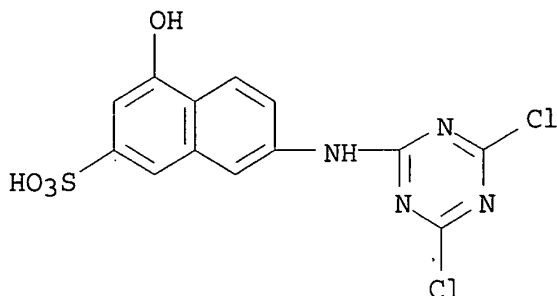


RN 22356-88-3 HCA  
 CN 2-Anthracenesulfonic acid, 1-amino-4-[[4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-3-sulfophenyl]amino]-9,10-dihydro-9,10-dioxo-(9CI) (CA INDEX NAME)



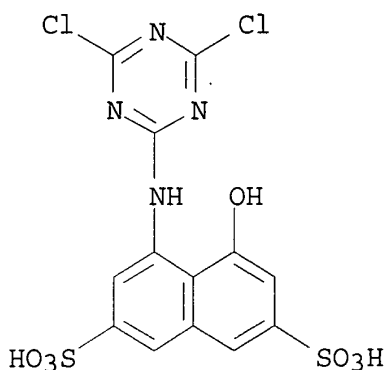
IT 2673-76-9 7538-88-7  
 (reaction of, with aminobenzenesulfonic acid)  
 RN 2673-76-9 HCA  
 CN 2-Naphthalenesulfonic acid, 7-[(4,6-dichloro-1,3,5-triazin-2-

yl)amino]-4-hydroxy- (9CI) (CA INDEX NAME)



RN 7538-88-7 HCA

CN 2,7-Naphthalenedisulfonic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-5-hydroxy- (9CI) (CA INDEX NAME)



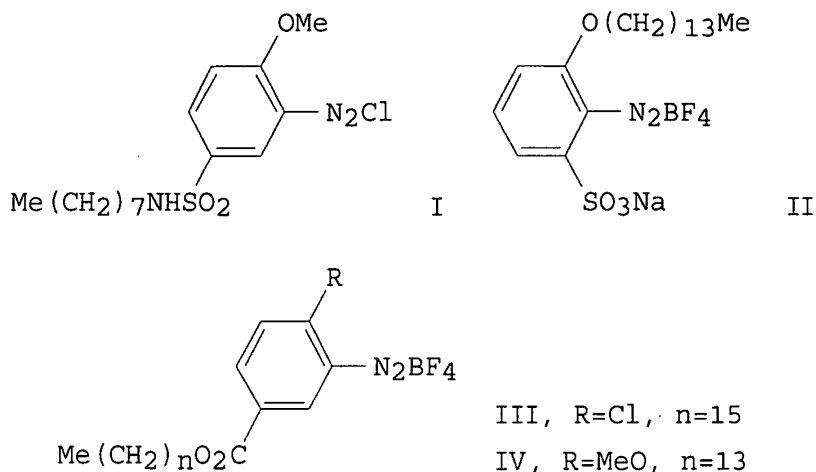
- CC 41-4 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
- ST **phosphono** reactive dye; chlorotriazine reactive dye; bifunctional reactive dye; azo reactive dye; anthraquinone reactive dye
- IT Dyes, reactive  
(bifunctional, azo and anthraquinone compds. contg. chlorotriazinyl and **phosphonic** acid groups, synthesis and dyeing properties of, on **cotton**)
- IT 93755-27-2P 93755-28-3P 93755-29-4P 93755-30-7P 93755-31-8P  
(prepn. and dyeing properties of, on **cotton fabric**)
- IT **13324-20-4** **22356-88-3** 93755-25-0  
(reaction of, with **aminobenzenephosphonic** acid)
- IT **2673-76-9** **7538-88-7**  
(reaction of, with aminobenzenesulfonic acid)

L60 ANSWER 17 OF 42 HCA COPYRIGHT 2003 ACS on STN

101:35195 Multilayer analytical elements for determination of enzyme activities. (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo

Koho JP 59030063 A2 19840217 Showa, 15 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1982-140736 19820813.

GI



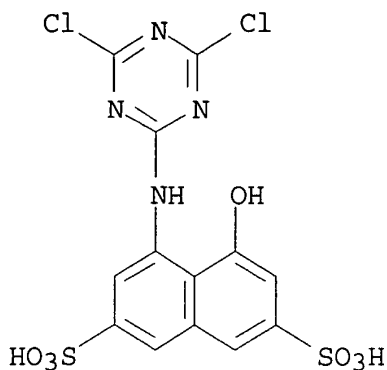
AB Multilayer anal. elements consisting of a diazonium compd. (I-IV), polycarboxylate binder, and coupler substrate layers are prepd. for detection of enzymes, esp. proteinase, amylase, lipase, and pectinase. Thus, a transparent poly(ethyleneterephthalate) film (180 .mu.m thickness) precoated with gelatin was further coated with the following reagent layers in successive order: a color developing layer (5 .mu.m) contg. IV, methylvinyl ether-monoethyl maleate copolymer, acetonitrile, MeOH, and COMe2; a diffusion prevention layer (6 .mu.m) contg. TiO2 powder and p-nonylphenoxy glycerol; a substrate layer (10 .mu.m) contg. coupler starch (prepd. by reacting corn starch with a reactive coupler, 2-[8-hydroxy-3,6-kis(sodium sulfonate)-1-naphthylamino]-4,6-dichloro-S-triazine, at a coupler-to-glucose ratio of 1/30), polyacrylamide, and p-nonylphenoxyglycerol; and a developing layer contg. a polyester-cotton (75:25) cloth soaked in an aq. soln. contg. polyacrylamide and p-nonylphenoxy glycerol. For detection of salivary amylase activity, saliva samples dild. with album soln. was applied on the above prepd. multilayer anal. element, developed at 37.degree., and measured with a reflectometer to det. amylase activity.

IT 17752-63-5

(coupling of, with starch for amylase detn.)

RN 17752-63-5 HCA

CN 2,7-Naphthalenedisulfonic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-5-hydroxy-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC G01N031-22; C12Q001-40; G01N033-50

CC 7-1 (Enzymes)

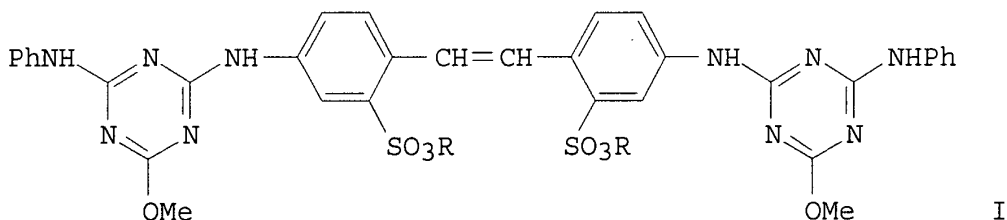
IT 17752-63-5

(coupling of, with starch for amylase detn.)

L60 ANSWER 18 OF 42 HCA COPYRIGHT 2003 ACS on STN

98:35526 Fluorescent brightener compositions. (Showa Chemical Industries, Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 57123262 A2 19820731 Showa, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1981-8991 19810126.

GI



I

AB Fluorescent whitener compns. for plastics, **textiles**, paper, and paper coatings contain C1-4 tetraalkylammonium salts of anionic fluorescent whiteners. For example, a melamine resin compd. contg. I (R = NMe4) [84046-30-0] 0.4, Zn stearate 0.1, and TiO<sub>2</sub> 1.0% was molded at 160.degree. and 270 kg/cm<sup>2</sup> for 2 min to give a whitener specimen with fluorescent reflectance (based on 100% for whitener-free control) 135%, compared with 129 and 125 for I (R = NH<sub>4</sub>Et<sub>3</sub>) and I (R = NCH<sub>2</sub>PhMe<sub>2</sub>C<sub>12</sub>H<sub>25</sub>), resp.

IT 84045-92-1

(fluorescent brightener, for melamine resins)

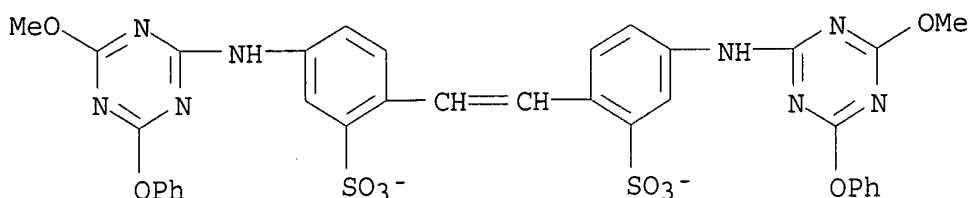
RN 84045-92-1 HCA

CN Methanaminium, N,N,N-trimethyl-, salt with 2,2'-(1,2-ethenediyl)bis[5-[(4-methoxy-6-phenoxy-1,3,5-triazin-2-yl)amino]benzenesulfonic acid] (2:1) (9CI) (CA INDEX NAME)

CM 1

CRN 84045-91-0

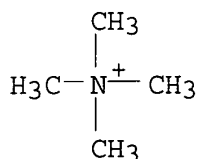
CMF C34 H26 N8 O10 S2



CM 2

CRN 51-92-3

CMF C4 H12 N



IC C09B057-00; C11D003-42

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 40, 42, 43

ST triazinylaminostilbenedisulfonate fluorescent whitener; melamine resin fluorescent whitener; paper fluorescent whitener; coating fluorescent whitener; **textile** fluorescent whitenerIT Quaternary ammonium compounds, uses and miscellaneous (bis(triazinylamino)stilbenedisulfonate, fluorescent brighteners, for plastics, **textiles**, coatings and paper)IT Fluorescent brighteners (bis(triazinylamino)stilbenedisulfonic acid deriv. quaternary ammonium salts, for plastics, **textiles**, coatings and paper)IT Paper Polyamide **fibers**, uses and miscellaneous**Rayon**, uses and miscellaneous

(fluorescent brighteners for, bis(triazinylamino)stilbenedisulfonic acid quaternary ammonium salts as)

IT 84046-12-8

- (fluorescent brightener, for **cotton**)
- IT 84045-92-1 84045-94-3 84045-95-4 84045-96-5  
84045-98-7 84046-00-4 84046-30-0  
(fluorescent brightener, for melamine resins)
- IT 84046-29-7  
(fluorescent brightener, for paper coatings and **rayon**)
- IT 84046-23-1 84046-25-3 84046-27-5  
(fluorescent brightener, for polyamide **fibers**)
- IT 84046-03-7 84046-05-9 84046-07-1 84046-09-3 84046-11-7  
84046-12-8 84046-13-9  
(fluorescent brightener, for **urea**-melamine resins)
- IT 84046-01-5  
(fluorescent brightener, for **urea**-melamine resins and  
ABS)

L60 ANSWER 19 OF 42 HCA COPYRIGHT 2003 ACS on STN

95:170994 Triphenodioxazine dyes. Marklow, Raymond Joseph (Imperial Chemical Industries Ltd., UK). Brit. UK Pat. Appl. GB 2059985 19810429, 8 pp. (English). CODEN: BAXXDU. APPLICATION: GB 1980-19151 19800611.

AB The title dyes comprising, in the free acid form, a 6,13-dibromotriphenodioxazine substituted by .gtoreq.1 SO<sub>3</sub>H group and 1-2 NRR<sub>1</sub> groups [R = H, optionally substituted (o.s.) hydrocarbyl; R<sub>1</sub> = H, o.s. hydrocarbyl, **cellulose**-reactive group] were prepd. The dyes are useful as acid or reactive dyes, usually of blue shades, having good tinctorial power and build-up with good fastness properties. Thus, 4-(.beta.-aminoethyl)-3-sulfoaniline [3638-42-4] was treated with bromanil [488-48-2] (H<sub>2</sub>O, pH 6.5-7.0, 65-70.degree., 6 h) to give a dianilide [79167-06-9] which was heated 1 h at 60.degree. in 20% oleum. The product [79167-05-8] was heated 4 h (aq. Me<sub>2</sub>CO, pH 9.0) with a soln. of th condensate of 2,5-(HO<sub>3</sub>S)2C<sub>6</sub>H<sub>3</sub>NH<sub>2</sub> (I) [98-44-2] with cyanuric chloride (II) [108-77-0], prepd. by dropwise addn. of II in Me<sub>2</sub>CO to I in aq. **phosphate** buffer soln. (pH 6.5) at 0-5.degree., to give the reactive dye [79172-16-0].

IT 79172-16-0P

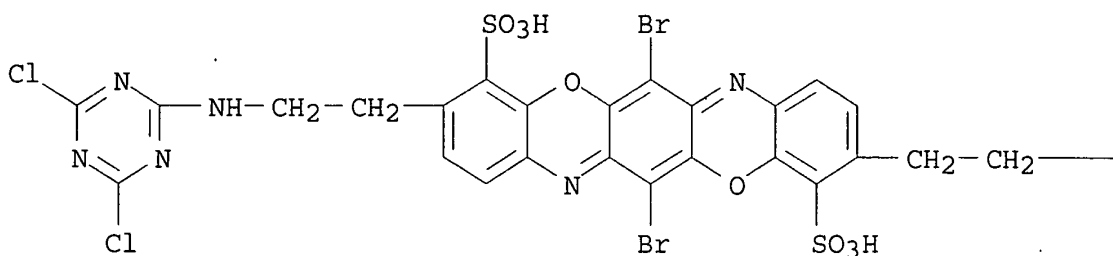
(prepn. of, as reactive dye)

RN 79172-16-0 HCA

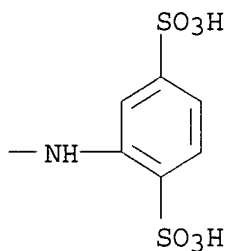
CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dibromo-3-[2-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]ethyl]-10-[2-[(2,5-disulphophenyl)amino]ethyl]- (9CI) (CA INDEX NAME).



PAGE 1-A



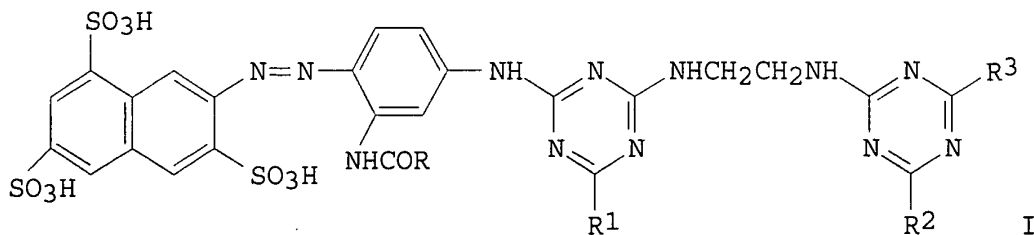
PAGE 1-B



IC C09B019-02  
 CC 40-6 (Dyes, Fluorescent Whitening Agents, and  
 Photosensitizers)  
 Section cross-reference(s): 28  
 IT 79172-16-0P  
 (prepn. of, as reactive dye)

L60 ANSWER 20 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 94:48819 Reactive azo compounds and their use for dyeing **fibers**  
 and **textiles**. Shirasaki, Toshitaka; Iizuka, Yutaka;  
 Yamada, Yasuhi (Nippon Kayaku Co., Ltd., Japan). Eur. Pat. Appl. EP  
 13996 19800806, 21 pp. (English). CODEN: EPXXDW. APPLICATION: EP  
 1980-100402 19800125.

GI



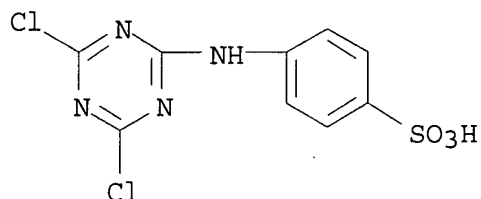
AB Reactive azo dyes (I; R = Me, amino; R1, R2 = Cl, F; R3 = anilino with 1-2 CO2H or SO3H groups and optionally substituted by Me or Cl, amino, Cl-4 alkylamino optionally substituted with HO, CO2H, or SO3H) are prepd. and used to dye and print **cellulosic textiles** in reddish yellow shades with higher color yields and brightness than similar dyes contg. a 4-sulfo-1,3-phenylene rather than a CH2CH2 bridge between reactive groups. Thus, 2-aminonaphthalene-3,6,8-trisulfonic acid [118-03-6] was diazotized, coupled with 3-aminophenylurea [25711-72-2], treated with cyanuric chloride [108-77-0] and treated with 2-chloro-4-(2-aminoethylamino)-6-(2-sulfoanilino)-s-triazine [76213-74-6] to give I (R = NH2, R1 = R2 = Cl, R3 = o-HO3SC6H4NH) [76213-92-8]. About 15 other I were prepd.

IT 16110-89-7

(reaction of, with ethylenediamine deriv., in dye manuf.)

RN 16110-89-7 HCA

CN Benzenesulfonic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-(9CI) (CA INDEX NAME)



IC C09B062-085; D06P001-382

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

IT Dyes, reactive

(bis[(chlorotriazinyl)amino]ethane azo derivs., for **cellulosic fibers**)

IT 118-03-6

(coupling of diazotized, with (aminophenyl)urea)

IT 76213-75-7 76213-77-9 76213-80-4 76213-92-8 76228-66-5  
(dye, for **cellulosic fibers**, prepn. of)

IT 102-28-3

(in manuf of **fiber**-reactive dyes)

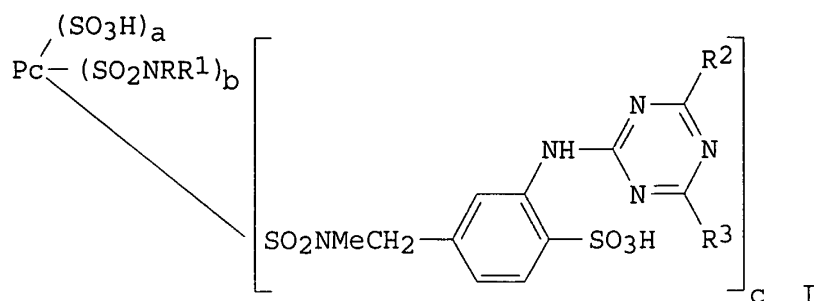
IT 16110-89-7

(reaction of, with ethylenediamine deriv., in dye manuf.)

L60 ANSWER 21 OF 42 HCA COPYRIGHT 2003 ACS on STN

92:216738 Phthalocyanine fiber-reactive dyes. Schreiner, Kurt; Jaeger, Horst; Schwaebel, Richard (Bayer A.-G., Fed. Rep. Ger.). Ger. Offen. DE 2828307 19800110, 5 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1978-2828307 19780628.

GI



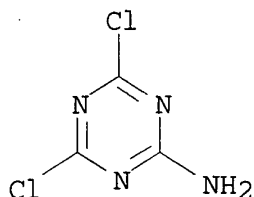
AB Dyes of general structure I (Pc = phthalocyanine residue; R and R1 = H, optionally substituted alkyl, cycloalkyl, aryl or RR1 = heteroatom-interrupted alkylene; R2 = alkoxy, aryloxy, heteroaryloxy, alkylthio, arylthio, heteroarylthio, amino; R3 = Cl, F; a = 0-2; b = 1-3; a + b + c  $\leq$  4) were prep'd. and used to dye **cellulosic** materials fast turquoise shades. Thus, a suspension of I (Pc = Cu phthalocyanine, R = R1 = H, R2 = R3 = Cl, a = c = 1, b = 2) (II) [73678-48-5] in ice water was adjusted to pH 9 by addn. of aq. NH3 and then heated to 40.degree. while maintaining pH 9 to give I (Pc = Cu phthalocyanine, R = R1 = H, R2 = NH2, R3 = Cl, a = c = 1, b = 2) [73678-49-6]. The prepn. of several similar dyes is also described.

IT 933-20-0

(reaction of, with amino-substituted phthalocyanine dyes)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC C09B062-06

CC 40-8 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

ST phthalocyanine fiber reactive dye; copper phthalocyanine reactive dye; **cellulose** fiber reactive dye; **cotton** reactive phthalocyanine dye; triazine phthalocyanine reactive dye; chlorotriazine phthalocyanine reactive dye; fluorotriazine phthalocyanine reactive dye

IT 73663-49-7P

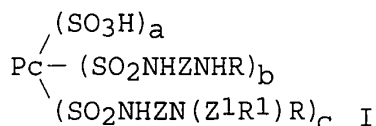
(manuf of, as a reactive dye for **cellulosic** materials)

IT 73663-34-0P 73663-36-2P 73663-43-1P 73663-46-4P 73663-47-5P  
73678-49-6P 73678-52-1P 73678-54-3P 73678-56-5P 73678-58-7P  
73678-61-2P 73697-42-4P

(manuf. of, as a reactive dye for **cellulosic** materials)  
 IT 73663-37-3P  
 (manuf. of, as a reactive dye for **cotton**)  
 IT 73663-44-2P  
 (manuf. of, as reactive dye for **cellulosic** materials)  
 IT 933-20-0 1652-36-4 3638-04-8 26816-44-4  
 (reaction of, with amino-substituted phthalocyanine dyes)

L60 ANSWER 22 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 92:216737 Phthalocyanine fiber-reactive dyes. Schreiner, Kurt; Jaeger,  
 Horst; Schwaebel, Richard (Bayer A.-G., Fed. Rep. Ger.). Ger.  
 Offen. DE 2828227 19800110, 46 pp. (German). CODEN: GWXXBX.  
 APPLICATION: DE 1978-282827 19780628.

GI

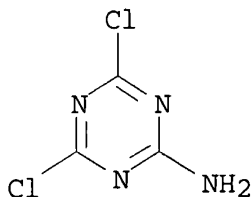


AB Dyes of general structure I (Pc = phthalocyanine residue, R =  
 reactive group, Rl = water solubilizing group, Z = alkylene with  
 .gtoreq.2 Catoms, Zl = alkylene, a = 0-2, b = 0-2, c = 1-4, a + b +  
 c .ltoreq.4) were prepd. and used to dye **cotton** in fast  
 turquoise shades. Thus, I(Pc = Cu phthalocyanine, Z = CH<sub>2</sub>CH<sub>2</sub>, R =  
 H, a = 1, b = 3, c = 0) (II) [73663-31-7] was suspended in H<sub>2</sub>O  
 mixed with NaOH to give pH 11, treated with BrCH<sub>2</sub>CO<sub>2</sub>H [79-08-3],  
 and heated at 50.degree. for 6h to give I(Pc = Cu phthalocyanine, R  
 = H, Rl = CO<sub>2</sub>H, Z = CH<sub>2</sub>CH<sub>2</sub>, Zl = CH<sub>2</sub>, a = c = 1, b = 2) (III)  
 [73663-32-8]. III was treated with 4-amino-2,6-dichlorotriazine [  
 933-20-0] at 0-5.degree. and heated to 30.degree. (pH 6-7)  
 to give I(Pc = Cu phthalocyanine, R = 4-amino-2-chloro-6-triazinyl,  
 Rl = CO<sub>2</sub>H, Z = CH<sub>2</sub>CH<sub>2</sub>, Zl = CH<sub>2</sub>, a = c = 1, b = 2) [73663-33-9].

IT 933-20-0  
 (reaction of, with [(aminoethyl)sulfamoyl]phthalocyanine dye)

RN 933-20-0 HCA

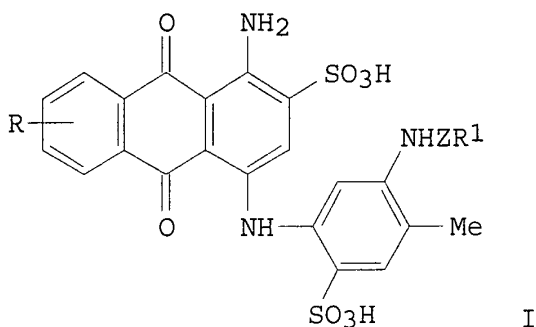
CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



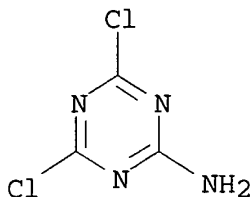
IC C09B062-02; C09B062-06; C09B062-14; C09B062-22  
 CC 40-8 (Dyes, Fluorescent Whitening Agents, and

- Photosensitizers)
- ST phthalocyanine fiber reactive dye; copper phthalocyanine reactive dye; nickel phthalocyanine reactive dye; **cotton** reactive phthalocyanine dye; triazine phthalocyanine reactive dye; chlorotriazine phthalocyanine reactive dye
- IT 73663-28-2P 73663-29-3P 73663-30-6P 73678-44-1P 73678-46-3P  
(manuf. of, as a reactive dye for **cotton**)
- IT 73663-33-9P  
(manuf. of, as reactive dye for **cotton**)
- IT 675-14-9 **933-20-0**  
(reaction of, with [(aminoethyl)sulfamoyl]phthalocyanine dye)
- L60 ANSWER 23 OF 42 HCA COPYRIGHT 2003 ACS on STN
- 90:153488 Anthraquinone fiber-reactive dyes. Jaeger, Horst; Harms, Wolfgang (Bayer A.-G., Fed. Rep. Ger.). Ger. Offen. DE 2729497 19790104, 32 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1977-2729497 19770630.

GI

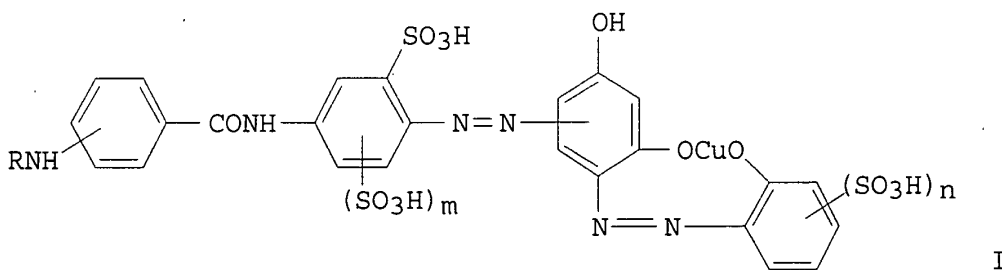


- AB Fiber-reactive anthraquinone dyes (I; R = H, Cl; R1 = reactive group; Z = bridging group or direct bond) were prepd. and used to dye **cotton** and wool fast blue shades. Thus, Na 1-amino-4-(4-methyl-3-acetamidoanilino)-2-anthraquinonesulfonate [69658-24-8] was sulfonated, the product [69658-25-9] hydrolyzed to di-K 1-amino-4-(4'-methyl-3'-aminoanilino)-2,6'-anthraquinonedisulfonate [69658-26-0], and treated with 2,4-dichloro-6-amino-s-triazine [933-20-0] to give I (R = H, R1 = 4-amino-6-chloro-s-triazin-2-yl, Z = direct bond) [69658-32-8].
- IT **933-20-0**  
(reaction of, with (aminoanilino)anthraquinone deriv.)
- RN 933-20-0 HCA
- CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC C09B001-24  
 CC 40-5 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
 ST sulfoanilinoanthraquinone fiber reactive dye; anthraquinone fiber reactive dye; **cotton** reactive dye; wool reactive dye; chlorotriazinyl reactive dye  
 IT Dyes, reactive  
     (amino(aminomethylsulfoanilino)anthraquinonesulfonic acid derivs., for **cotton** and wool)  
 IT 69658-34-0  
     (dye, for **cotton**, prepn. of)  
 IT 108-77-0 675-14-9 697-83-6 933-20-0 1780-40-1  
     17901-16-5 18791-02-1 26424-27-1  
     (reaction of, with (aminoanilino)anthraquinone deriv.)  
 L60 ANSWER 24 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 90:73294 Fiber-reactive azo dyes. Riat, Henri; Oesterlein, Fritz (Ciba-Geigy A.-G., Switz.). Patentschrift (Switz.) CH 606340 19781031, 9 pp. (German). CODEN: SWXXAS. APPLICATION: CH 1972-13225 19720908.

GI



I

AB Title dyes [I; R = dichloro-, aminochloro-, chloro(sulfoanilino)-s-triazinyl; m = 0, 1; n = 1, 2] were prepd. and used to dye **cotton** and other **cellulosic** fibers fast brown shades. Thus, reaction of 4-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CONHC<sub>6</sub>H<sub>3</sub>(NH<sub>2</sub>)SO<sub>3</sub>Na-4,3 [69065-59-4] with Na 3-[(4,6-dichloro-s-triazin-2-yl)amino]benzenesulfonate [3533-55-9] in H<sub>2</sub>O at 30.degree., diazotization of the product, and addn. to a soln. of the 1:1 Cu

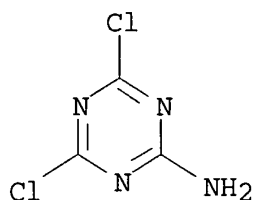
complex [51819-19-3] of 2,4-(HO)2C6H3N:NC6H3(OH)SO3Na-2,5 gave a disazo dye [69092-47-3] for **cellulose** fibers. Other I were prepd. similarly.

IT 933-20-0

(reaction of, with aminobenzanilide deriv., in azo dye manuf.)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC C09B062-00

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

ST azo reactive dye; fiber reactive azo dye; disazo reactive dye; copper complex azo reactive dye; **cotton** azo reactive dye

IT Dyes, reactive

(disazo copper complexes, chlorotriazine group-contg., for **cellulosic** fibers)

IT 69092-47-3P

(manuf. of, as **cellulose** fiber dye)

IT 69092-46-2P 69092-48-4P 69092-49-5P

(manuf. of, as **cotton** dye)

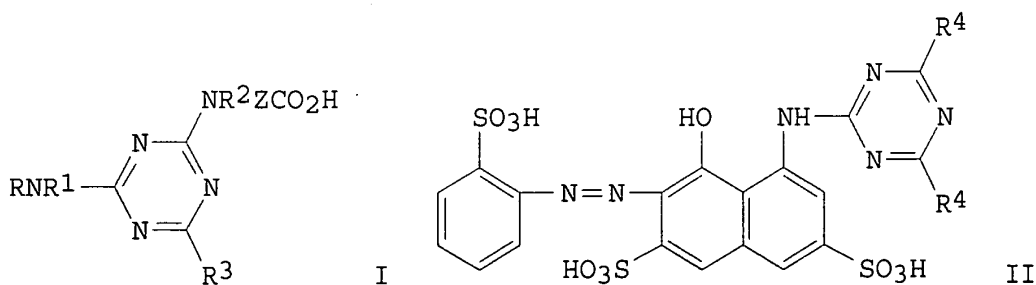
IT 933-20-0 3533-55-9

(reaction of, with aminobenzanilide deriv., in azo dye manuf.)

L60 ANSWER 25 OF 42 HCA COPYRIGHT 2003 ACS on STN

90:56338 [[[Carboxyalkyl(aryl)]amino]-s-triazinyl]amino dyes. Dussy, Paul; Hoelzle, Gerd (Ciba-Geigy A.-G., Switz.). Ger. Offen. DE 2814802 19781019, 54 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1978-2814802 19780405.

GI



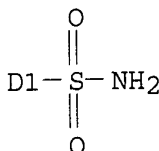
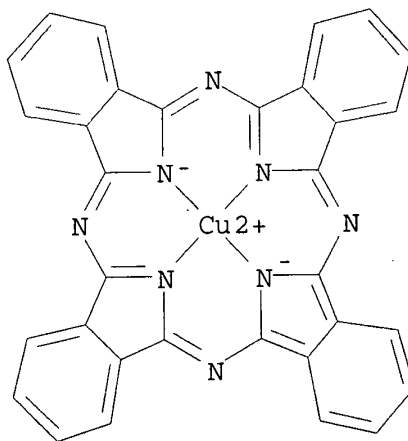
AB Title dyes of general structure I are prepd., where R is a dye residue, R1 and R2 = H or lower alkyl, Z = alkylene or arylene, and R3 = H, (substituted) amino, (etherified) hydroxy or mercapto, or a (substituted) hydrocarbon group. I are applied to **textiles**, esp. **cotton**, from aq. media and are fixed by heating in the presence of alkali. For example, reaction of H<sub>2</sub>NCH<sub>2</sub>CO<sub>2</sub>H [56-40-6] with the Na salt [17752-85-1] of II (R<sub>4</sub> = Cl) in H<sub>2</sub>O at 45.degree. and pH 7-7.5, addn. of Na<sub>2</sub>CO<sub>3</sub>, heating at 90-5.degree., addn. of HCl to pH 4.5, and salting gave II (R<sub>4</sub> = NHCH<sub>2</sub>CO<sub>2</sub>H) (III) [68820-62-2]. **Cotton fabric** was dyed by impregnating with an aq. bath contg. III, **urea**, and calcined soda, drying, and heating for 0.5-5 min at 140-210.degree..

IT **68805-53-8**  
(reaction of, with alanine)

RN 68805-53-8 HCA

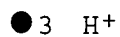
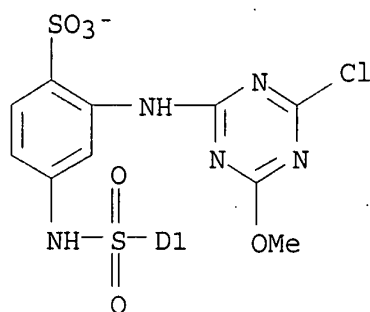
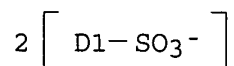
CN Cuprate(3-), [C-(aminosulfonyl)-C-[[[3-[(4-chloro-6-methoxy-1,3,5-triazin-2-yl)amino]-4-sulfonyl]amino]sulfonyl]-29H,31H-phthalocyanine-C,C-disulfonato(5-)-N<sub>29</sub>,N<sub>30</sub>,N<sub>31</sub>,N<sub>32</sub>]-, trihydrogen (9CI) (CA INDEX NAME)

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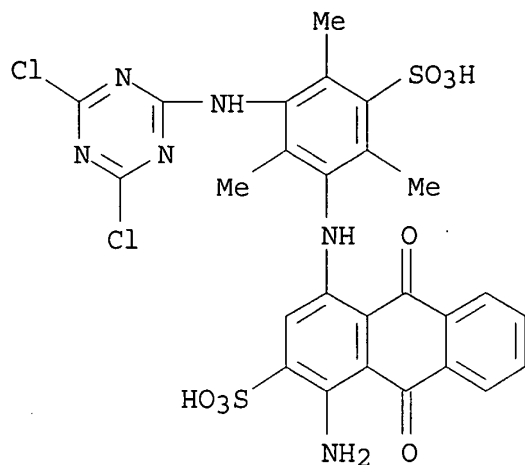




PAGE 2-A

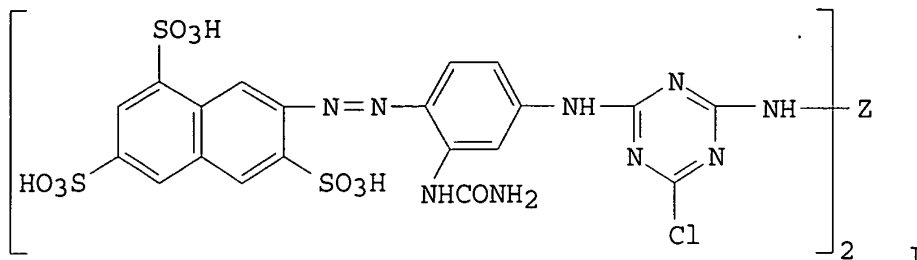


IT 68820-58-6  
 (reaction of, with glycine)  
 RN 68820-58-6 HCA  
 CN 2-Anthracenesulfonic acid, 1-amino-4-[[3-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-2,4,6-trimethyl-5-sulfohenyl]amino]-9,10-dihydro-9,10-dioxo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC C09B062-44  
 CC 40-9 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
 ST carboxyalkylaminotriazinyl dye **cotton**; triazine carboxyalkylamino dye **cotton**; **fiber** reactive dye; **cotton** dye; azo dye **cotton**  
 IT Dyes, reactive  
     ([[[[carboxyalkyl(aryl)]amino]triazinyl]amino compds., for **cellulosic fibers**)  
 IT 68820-62-2P  
     (manuf. of, as dye for **cotton**)  
 IT 68805-53-8 68820-60-0  
     (reaction of, with alanine)  
 IT 68820-58-6  
     (reaction of, with glycine)  
 L60 ANSWER 26 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 87:103357 Fiber-reactive dyes. Seitz, Karl; Begrich, Reiner; Riat, Henri; Osterlein, Fritz (Ciba-Geigy A.-G., Switz.). Patentschrift (Switz.) CH 589702 19770715, 9 pp. (German). CODEN: SWXXAS.  
 APPLICATION: CH 1974-238 19740109.  
 GI



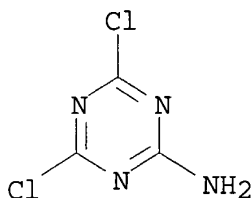
AB Fiber-reactive dye I (Z = CO) [57166-15-1], printing and dyeing **cotton** a fast, deep golden yellow shade showing good washoff properties of unfixed dye, is prepd. by condensing the aminoazo chromophore [27744-68-9] with N,N'-bis(4,6-dichloro-1,3,5-triazin-2-yl)urea [57166-14-0].

IT 933-20-0

(reaction of, with phosgene)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC C09B062-04

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

ST chlorotriazinylurea functional reactive dye; **cotton** reactive dye; azo reactive dye

IT Dyes, reactive

(bis(chlorotriazinyl)urea disazo derivs., for **cotton**)

IT 57166-15-1

(dye, for **cotton**, prepn. of)

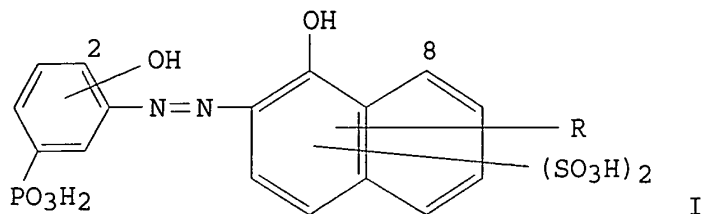
IT 933-20-0

(reaction of, with phosgene)

L60 ANSWER 27 OF 42 HCA COPYRIGHT 2003 ACS on STN

86:107985 Copper-monoazo complex dyes. Andrew, Herbert F.; Ramsay, David W. C.; Stead, Cecil V. (Imperial Chemical Industries Ltd., UK). Ger. Offen. DE 2620120 19761118, 21 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1976-2620120 19760506.

GI



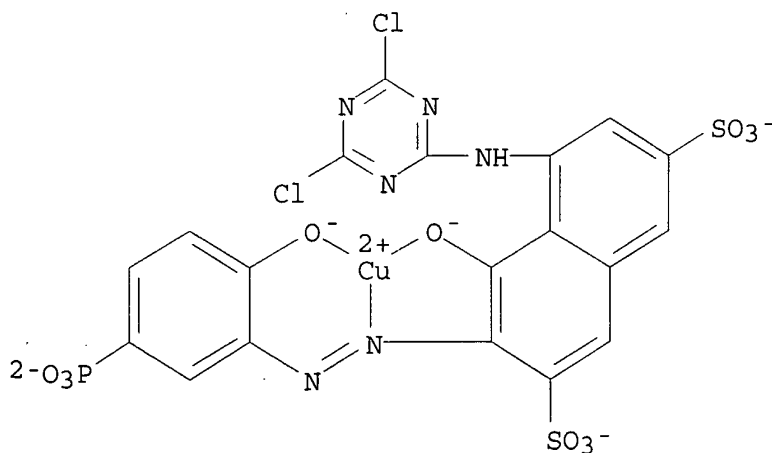
AB 1:1 Cu complexes of I (R = AcNH, s-triazinylamino derivs.) were prepd. and used to dye **cellulosic fibers** fast red to violet shades, some as reactive dyes when applied with dicyandiamide. Thus, 4,3-HO(H<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>PO<sub>3</sub>H<sub>2</sub> [59785-86-3] was diazotized, coupled with 1,8,3,6-AcNH(HO)C<sub>10</sub>H<sub>4</sub>(SO<sub>3</sub>H)<sub>2</sub> [134-34-9], and treated with CuSO<sub>4</sub> in aq. NH<sub>4</sub>OH to give the 1:1 Cu complex [61525-77-7] of I (R = 8-AcNH; (SO<sub>3</sub>H)<sub>2</sub> in 3,6-positions; OH in 2-position).

IT 61525-73-3P

(dyes, or **cellulosic fibers**, prepn. of)

RN 61525-73-3 HCA

CN Cuprate(4-), [5-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-4-hydroxy-3-[(2-hydroxy-5-phosphonophenyl)azo]-2,7-naphthalenedisulfonato(6-)]-, hexasodium (9CI) (CA INDEX NAME)



● 4 Na<sup>+</sup>

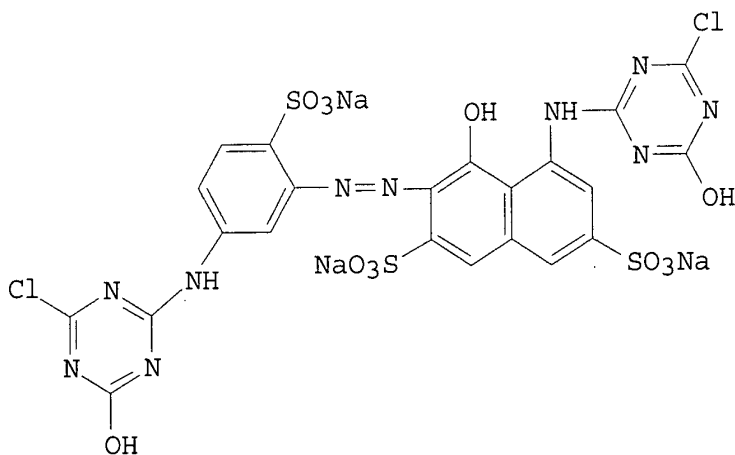
IC C09B045-18

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

- ST copper complex azo dye **benzenephosphonic**; reactive  
**benzenephosphonic acid dye**; **cellulosic**  
**fiber dye**
- IT Dyes, azo  
Dyes, reactive  
(hydroxy[(**hydroxyphosphonophenyl**  
)azo]naphthalenedisulfonic acid 1:1 copper complexes, for  
**cellulosic fibers**)
- IT 134-34-9  
(coupling of, with diazotized **aminohydroxybenzenephosphonic\***  
**\*\* acid**)
- IT 61525-74-4 61525-75-5 61525-76-6 61525-77-7  
(dye, for **\*\*\*cellulosic fibers**, prepn. of)
- IT 61525-69-7P 61525-70-0P 61525-73-3P  
(dyes, or **cellulosic fibers**, prepn. of)

L60 ANSWER 28 OF 42 HCA COPYRIGHT 2003 ACS on STN  
86:107940 New coloration process. Eckersley, Dennis; Glover, Brian;  
Sharples, Jack; Williams, Gerald (Imperial Chemical Industries Ltd.,  
UK). Brit. GB 1450214 19760922, 15 pp. (English). CODEN: BRXXAA.  
APPLICATION: GB 1973-56374 19741107.

GI



I

- AB **Cotton-polyester fabrics** were printed in 1 step  
by applying a paste (pH = 5.0-8.0) contg. a disperse dye and a dye  
contg. chlorohydroxytriazine groups and heating at 150-220.degree..  
Thus, a paste (pH = 6.5) contg. 3.0 parts chlorohydroxytriazine dye  
I [61921-61-7] prepd. by alk. hydrolysis of the chlorotriazine dye  
[61921-60-6] of Example 2 (Table 1 3rd dye) of Brit. Patent 837,035,  
and also contg. an azo dye 2.0, H2O 41.8, low-viscosity Na alginate  
50.00, Na **hexametaphosphate** 1.2, Na m-

nitrobenzenesulfonate 1.0, and wetting agent soln. 1.0 part was printed on a 66:33 polyester-cotton fabric which was dried, steamed 6 min at 170.degree., and washed to give a red print of solid appearance.

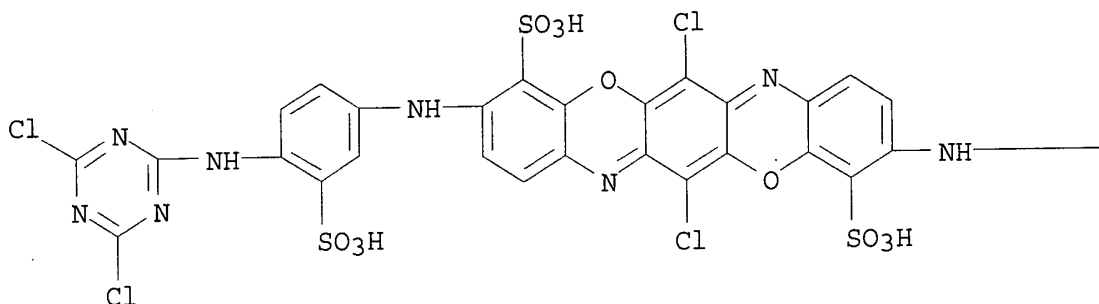
IT 42783-03-9

(hydrolysis of)

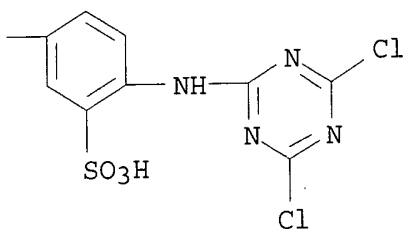
RN 42783-03-9 HCA

CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dichloro-3,10-bis[[4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-3-sulphophenyl]amino]- (9CI)  
(CA INDEX NAME)

PAGE 1-A



PAGE 1-B



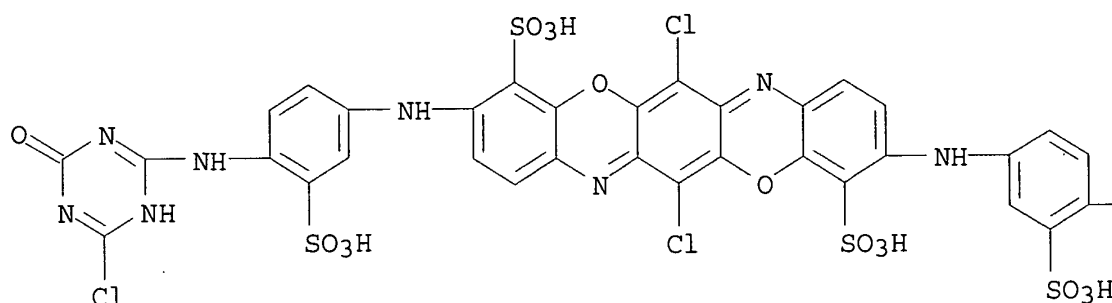
IT 61921-59-3

(printing of cotton-polyester textiles with disperse dyes and)

RN 61921-59-3 HCA

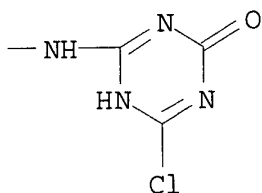
CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dichloro-3,10-bis[[4-[(6-chloro-1,4-dihydro-4-oxo-1,3,5-triazin-2-yl)amino]-3-sulphophenyl]amino]-, tetrasodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



●4 Na

PAGE 1-B

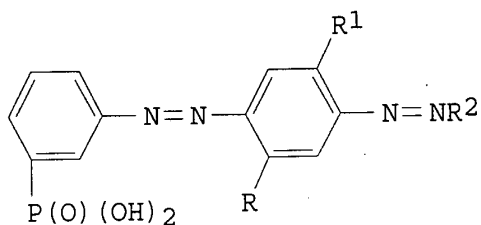


- IC D06P003-872  
 CC 39-7 (Textiles)  
 Section cross-reference(s): 28  
 ST **textile** printing chlorohydroxytriazine dye; dye blend  
 chlorohydroxytriazine disperse; triazine hydroxychloro dye;  
 polyester **cotton fabric** printing; hydrolysis  
 chlorotriazine dye  
 IT Polyester **fibers**, uses and miscellaneous  
 (**cotton** blends, printing of, with disperse-  
 chlorohydroxytriazine dyes)  
 IT **Textile** printing  
 (on **cotton-polyester fabrics**, with disperse  
 and hydroxychlorotriazine dyes)  
 IT 42783-03-9 61921-60-6

(hydrolysis of)  
 IT 61921-59-3 61921-61-7  
 (printing of cotton-polyester textiles with  
 disperse dyes and)

L60 ANSWER 29 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 86:56738 Azo dyes. Andrew, Herbert F.; Ramsay, David W. C.; Stead,  
 Cecil V. (Imperial Chemical Industries Ltd., UK). Ger. Offen. DE  
 2617314 19761111, 37 pp. (German). CODEN: GWXXBX. APPLICATION: DE  
 1976-2617314 19760421.

GI

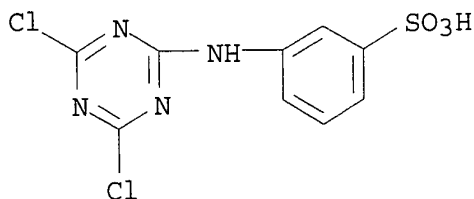


AB Azo dyes (I, R = Me, CH<sub>2</sub>PO<sub>3</sub>H<sub>2</sub>; R<sub>1</sub> = H, MeO; R<sub>2</sub> = naphthalenesulfonic acid deriv., aniline deriv., phenol deriv.), their metallized derivs., and derivs. contg. a chloro-s-triazine residue were prepd. and used to dye **cellulosic fibers** fast blue to violet shades. Thus, 3-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>PO<sub>3</sub>H<sub>2</sub> [5427-30-5] was diazotized, coupled with 5,2-Me(MeO)C<sub>6</sub>H<sub>3</sub>NH<sub>2</sub> [120-71-8], the resulting aminoazo compd. [61519-71-9] diazotized, and coupled with 2,5,1,7-H<sub>2</sub>N(HO)C<sub>10</sub>H<sub>4</sub>(SO<sub>3</sub>H)<sub>2</sub> [6535-70-2] to give I (R = Me, R<sub>1</sub> = MeO, R<sub>2</sub> = 1,6,3,5,2-HO(H<sub>2</sub>N)(HO<sub>3</sub>S)<sub>2</sub>C<sub>10</sub>H<sub>3</sub> [61519-72-0]).

IT 3533-55-9  
 (reaction of, with aminodisazo dye deriv.)

RN 3533-55-9 HCA

CN Benzenesulfonic acid, 3-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-, monosodium salt (9CI) (CA INDEX NAME)

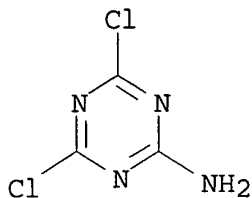


● Na

IC C09B031-12



- CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
- ST disazo **benzenephosphonic acid dye**; azo **benzenephosphonic acid dye**; **cellulosic fiber dye**; reactive **benzenephosphonic acid dye**
- IT Dyes, azo  
(**benzenephosphonic acid disazo derivs.**, for **cellulosic fibers**)
- IT Dyes, reactive  
(**benzenephosphonic acid metallized azo derivs.**, for **cellulosic fibers**)
- IT 25711-72-2  
(coupling of, with diazotized **aminoazobenzenephosphonic acid deriv.**)
- IT 134-34-9 139-02-6  
(coupling of, with diazotized **aminoazobenzenephosphonic acid derivs.**)
- IT 120-71-8 61519-67-3  
(coupling of, with diazotized **aminobenzenephosphonic acid**)
- IT 61519-68-4 61519-69-5 61519-70-8 61519-72-0  
(dye, for **cellulosic fibers**, prepn. of)
- IT 61519-66-2  
(dyes, for **cellulosic fibers**, prepn. of)
- IT 61551-06-2P  
(dyes, with **cellulosic fibers**, prepn. of)
- IT 3533-55-9  
(reaction of, with aminodisazo dye deriv.)
- L60 ANSWER 30 OF 42 HCA COPYRIGHT 2003 ACS on STN  
83:207558 Bis(dihalogen-s-triazinyl) ureas. Seitz, Karl; Begrich, Rainer; Riat, Henri; Oesterlein, Fritz (Ciba-Geigy A.-G., Switz.). Ger. Offen. DE 2500427 19750717, 15 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1975-2500427 19750107.
- GI For diagram(s), see printed CA Issue.
- AB I (R = Cl) [57166-14-0] was prepd. by reaction of 2-amino-4,6-dichloro-s-triazine [933-20-0] with phosgene [75-44-5] or 2,4-dichloro-6-isocyanato-s-triazine [4063-62-1] and treated with 3,6,8,2-(HO3S)3C10H4NH2 .fwdarw. 3-H2NC6H4NHCONH2 [28566-82-7] to give reactive dye I[R = 3,6,8,2-(HO3S)3C10H4N:NC6H3(NHCONH2)NH-2,4] [57166-15-1], deep golden yellow on **cotton**.
- IT 933-20-0  
(reaction of, with phosgene or dichloroisocyanatotriazine)
- RN 933-20-0 HCA
- CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC C07D  
 CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
 ST reactive azo urea dye; **cotton** reactive dye; chlorotriazinylurea deriv; triazinylurea deriv  
 IT Dyes, reactive  
     (bis[chloro[[ (naphthylazo)phenyl]amino]triazinyl]urea derivs., **cotton**)  
 IT 57166-15-1  
     (dye, for **cotton**, prepn. of)  
 IT 933-20-0  
     (reaction of, with phosgene or dichloroisocyanatotriazine)

L60 ANSWER 31 OF 42 HCA COPYRIGHT 2003 ACS on STN

83:133349 Reactive fluorescent whitening agents possessing a skeleton of 4,4'-bis(4-chloro-1,3,5-triazin-2-ylamino)-2,2'-stilbenedisulfonic acid. Tanaka, Meguru; Sakuma, Shigeaki; Sekiguchi, Shizen; Matsui, Kohji (Fac. Eng., Gunma Univ., Kiryu, Japan). Nippon Kagaku Kaishi (5), 885-90 (Japanese) 1975. CODEN: NKAKB8. ISSN: 0369-4577.

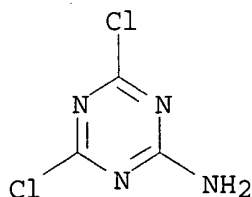
GI For diagram(s), see printed CA Issue.

AB Fiber-reactive fluorescent whiteners [I, R = OMe, OPh, SEt, SPh, NH<sub>2</sub>, NHMe, NMe<sub>2</sub>, NHPh, NMePh, N(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>] were prep'd. and used to whiten **cotton** textiles. Polyamide fibers were whitened with I, the yields of fixed whitener exceeding 80%, but silk fibers were not effectively whitened with I even though fixation yields were high. Nonfiber-reactive analogs of I were prep'd., and their properties were compared with I.

IT 933-20-0P  
     (prepn. and reaction of, with disulfostilbenediamine)

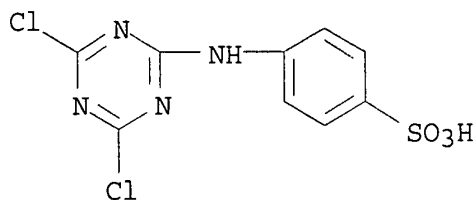
RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



CC 40-11 (Dyes, Fluorescent Whitening Agents, and

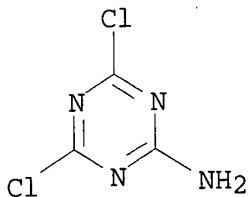
- Photosensitizers)
- IT Fluorescent brighteners  
(bis[(chlorotriazinyl)amino]stilbenedisulfonic acid derivs., for  
cotton and polyamide fibers, prepn. and properties of)
- IT 933-20-0P 2272-40-4P 2401-64-1P 3019-16-7P  
3638-04-8P 3995-42-4P 4682-78-4P 13733-90-9P 27282-80-0P  
(prepn. and reaction of, with disulfostilbenediamine)
- IT 26110-34-9P 50570-59-7P 54114-81-7P 56682-88-3P 56682-89-4P  
56682-90-7P 56682-91-8P 56682-92-9P 56682-93-0P 56682-95-2P  
(prepn. and spectra of, fiber-reactive fluorescent whiteners, for  
cotton and polyamide fibers)
- L60 ANSWER 32 OF 42 HCA COPYRIGHT 2003 ACS on STN
- 83:12180 **Fiber-reactive azo dyes.** Imahori, Seiichi; Ishizaka,  
Tatsumi; Okada, Itaru; Kato, Yoshiaki (Mitsubishi Chemical  
Industries Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 49133675  
19741223 Showa, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
1973-47806 19730426.
- GI For diagram(s), see printed CA Issue.
- AB **Textiles** are dyed with an azo compd. of structure I, where  
R is a sulfo- or carboxy-substituted phenyl or naphthyl group, R1  
and R4 are H or optionally substituted lower alkyl, R2 is  
sulfo-substituted lower alkyl or aryl, R3 is H or lower alkyl or  
alkoxy, R5 is halo, NH2, lower alkylamino, arylamino, lower alkoxy,  
aryloxy, lower alkylthio, or arylthio, R6 is halo, and Y is N or CR7  
(R7 is halo). For example, 1,2-HO3SC10H6NH2 [81-16-3] was  
diazotized and coupled with 4-HO3SC6H4NHCONHC6H4NH2-3 [55447-84-2],  
and the product condensed with cyanuric chloride [108-77-0] to give  
I (R = 1,2-HO3SC10H6, R1 = R3 = R4 = H, R2 = 4-HO3SC6H4, R5 = R6 =  
Cl, Y = N) [55447-85-3], light- and wetfast reddish yellow on  
cotton. Similar shades were obtained with I [R =  
1,5,2-(HO3S)2C10H5, R1 = R4 = H, R2 = CH2CH2SO3H, R3 = OMe, R5 =  
NH2, R6 = Cl, Y = N] [55447-86-4] and I [R = 1,5,2-(HO3S)C10H5, R1 =  
R3 = H, R2 = 4-HO3SC6H4, R4 = Me, R5 = 4-HO3SC6H4NH, R6 = Cl, Y = N]  
[55447-87-5], similarly prepd.
- IT 16110-89-7  
(reaction of, with amino azo compds.)
- RN 16110-89-7 HCA
- CN Benzenesulfonic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-  
(9CI) (CA INDEX NAME)



NCL 48B0; 48B111; 23D1

CC 40-4 (Dyes, Fluorescent Whitening Agents, and

- Photosensitizers)
- ST **fiber** reactive azo dye; **urea** deriv azo dye;  
cyanuric chloride deriv azo dye; **cotton** reactive azo dye
- IT Dyes, reactive  
(sulfonated (chlorotriazinylamino)ureidophenylazonaphthalene  
derivs., **cotton**)
- IT 81-16-3  
(coupling of diazotized, with (aminophenyl)(sulfophenyl)  
**urea**)
- IT 55447-85-3 55447-86-4 55447-87-5  
(dyes, for **cotton**)
- IT 108-77-0 16110-89-7  
(reaction of, with amino azo compds.)
- L60 ANSWER 33 OF 42 HCA COPYRIGHT 2003 ACS on STN  
82:141611 Fiber-reactive dyes. Austin, Peter W. (Imperial Chemical  
Industries Ltd.). Ger. Offen. DE 2422466 19741128, 36 pp.  
(German). CODEN: GWXXBX. APPLICATION: DE 1974-2422466 19740509.
- GI For diagram(s), see printed CA Issue.
- AB Fiber-reactive dyes (I, R=Cl, m-HO<sub>3</sub>SC<sub>6</sub>H<sub>4</sub>NH,  
[(aminochlorotriazinyl)amino]sulfoanilino, R<sub>1</sub>=Cl, pyridinio,  
trimethylammonio; n=0, 1] were prepd. and dyed **cellulosic**  
fiber fast, fluorescent greenish yellow shades. Thus, a mixt. of  
4-amino-3-sulfo-1,8-naphthalic anhydride [6357-99-9] and  
4,2-H<sub>2</sub>N(HO<sub>3</sub>S)C<sub>6</sub>H<sub>3</sub>CH:CHC<sub>6</sub>H<sub>3</sub>(SO<sub>3</sub>H)NO<sub>2</sub>-2,4 [119-72-2] was condensed and  
refluxed, the intermediate isolated, reduced with FeCl<sub>3</sub>, the amino  
intermediate isolated, condensed with cyanuric chloride, and salted  
to give reactive dye I (R = R<sub>1</sub> = Cl, n = 0) [54392-58-4]. The other  
I were similarly prepd.
- IT 933-20-0  
(reaction of, with [(aminosulfophenyl)amino]-contg.  
fiber-reactive dye)
- RN 933-20-0 HCA
- CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



- IC C09B
- CC 40-9 (Dyes, Fluorescent Whitening Agents, and  
Photosensitizers)
- ST reactive naphthalide stilbene dye; fluorescent reactive dye;  
**cellulose** fiber reactive dye
- IT Dyes, reactive  
((disulfostilbenyl)naphthalimide derivs., **cellulosic**  
fibers)

IT 933-20-0

(reaction of, with [(aminosulfophenyl)amino]-contg.  
fiber-reactive dye)

L60 ANSWER 34 OF 42 HCA COPYRIGHT 2003 ACS on STN

82:45032 **Fiber-reactive dyes.** (Ciba-Geigy A.-G.). Fr. Demande  
FR 2202132 19740503, 23 pp. (French). CODEN: FRXXBL. APPLICATION:  
FR 1973-23006 19730622.

GI For diagram(s), see printed CA Issue.

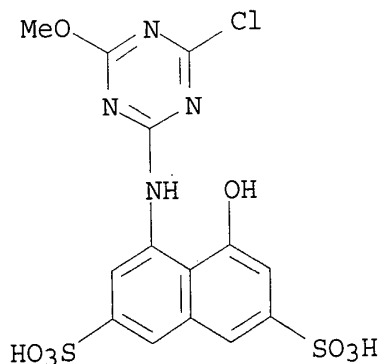
AB **Fiber-reactive dyes** (I, R = azo, Cu phthalocyanine, nitro  
dye residue; R1 = Cl, p-HO3SC6H4NH) were prepd. and used to dye  
**cellulosic fibers** fast shades. Thus,  
2-amino-4,6-dichloro-s-triazine [933-20-0] was treated  
with PCl5 to give (4,6-dichloro-s-triazinyl)phosphorimidic  
trichloride [18895-67-5] and hydrolysis gave  
(4,6-dichloro-s-triazinyl)phosphorimidic acid (II) [  
18895-76-6]. II was condensed with 2-amino-1-[(4-amino-2-  
sulfophenyl)azo]-8-hydroxy-6-naphthalenesulfonic acid [24042-07-7]  
to give reactive dye (III) [53555-36-5], bluish red on  
**cotton**.

IT 52085-31-1

(coupling of, with diazotized [chloro(aminosulfoanilino)triazinyl  
]phosphoramidic acid)

RN 52085-31-1 HCA

CN 2,7-Naphthalenedisulfonic acid, 4-[(4-chloro-6-methoxy-1,3,5-triazin-  
2-yl)amino]-5-hydroxy- (9CI) (CA INDEX NAME)

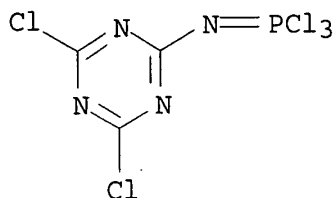


IT 18895-67-5P

(prepn. of)

RN 18895-67-5 HCA

CN Phosphorimidic trichloride, (4,6-dichloro-1,3,5-triazin-2-yl)- (9CI)  
(CA INDEX NAME)

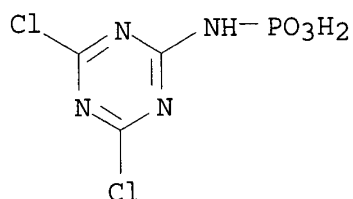


IT 18895-76-6

(reaction of, with amino group-contg. dyes)

RN 18895-76-6 HCA

CN Phosphoramidic acid, (4,6-dichloro-1,3,5-triazin-2-yl)- (9CI) (CA INDEX NAME)

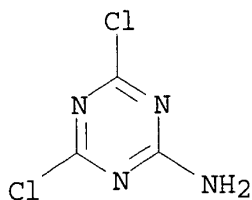


IT 933-20-0

(reaction of, with phosphorus pentachloride)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC C09B; D06P

CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

ST **fiber** reactive dye; triazinylphosphoramidic acid reactive dye; **cellulosic fiber** dye; **cotton** reactive dye; phosphoramidic **fiber** reactive dye

IT Dyes, reactive

((chlorotriazinyl)phosphoramidic acid derivs., **cotton**)IT 1,5-Naphthalenedisulfonic acid, 7-[[4-[[4-chloro-6-(**phosphonoamino**)-1,3,5-triazin-2-yl]amino]-2-methylphenyl]azo]-3-[(2,8-dihydroxy-3,6-disulfo-1-naphthalenyl)azo]-4-hydroxy-, copper complex  
1,5-Naphthalenedisulfonic acid, 7-[[4-chloro-6-(

**phosphonoamino**)-1,3,5-triazin-2-yl]amino]-3-[(2,8-dihydroxy-3,6-disulfo-1-naphthalenyl)azo]-4-hydroxy-, Cu complex  
Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, [[[chloro(**phosphonoamino**)triazinyl]amino]phenyl]sulfamoyl sulfo  
derivs., (SP-4-1)-  
(prepn. of)

- IT 52085-31-1  
(coupling of, with diazotized [chloro(aminosulfoanilino)triazinyl  
]phosphoramidic acid)
- IT 18895-67-5P 51542-04-2P 52084-54-5P 52084-55-6P  
52085-25-3P 52085-26-4P 52085-27-5P 52085-29-7P 52085-30-0P  
52085-33-3P 52657-39-3P 53555-26-3P 53555-33-2P 53555-34-3P  
53555-36-5P  
(prepn. of)
- IT 18895-76-6  
(reaction of, with amino group-contg. dyes)
- IT 933-20-0  
(reaction of, with phosphorus pentachloride)

L60 ANSWER 35 OF 42 HCA COPYRIGHT 2003 ACS on STN

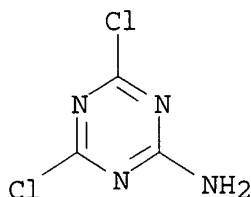
81:51110 Fiber-reactive dyes. Begrich, Rainer (Ciba-Geigy A.-G.). Ger.  
Offen. DE 2331518 19740110, 80 pp. (German). CODEN: GWXXBX.  
APPLICATION: DE 1973-2331518 19730620.

AB Fiber-reactive dyes (I, R = azo, metallized azo, nitro, and  
sulfonated phthalocyanine residue; n = 1-3) were prepd. and were  
used to dye **cellulose** fiber fast shades. Thus, dried  
2-amino-4,6-dichloro-s-triazine was treated with PCl<sub>5</sub> to give  
(4,6-dichloro-s-triazin-2-yl)phosphorimidic trichloride and then  
hydrolyzed at pH 7-8 to (4,6-dichloro-s-triazin-2-yl)phosphoramidic  
acid (II) [18895-76-6]. II was condensed with 2,4-(H<sub>2</sub>N)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>SO<sub>3</sub>H  
and the intermediate amine was diazotized and coupled with  
1,8,3,6-HO(BzNH)ClO<sub>4</sub>(SO<sub>3</sub>H)<sub>2</sub> to give fiber-reactive dye (III)  
[51542-04-2]. The other I were similarly prepd.

IT 933-20-0  
(reaction of, with phosphorus pentachloride)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC C09B

CC 40-4 (Dyes, Fluorescent Whitening Agents, and  
Photosensitizers)

ST fiber reactive chlorotriazinylphosphoramidic dye; azo fiber reactive  
dye; phthalocyanine fiber reactive dye; **cotton** fiber

reactive dye; phosphoramidic acid reactive dye  
 IT Dyes, reactive  
 ((chlorotriazinyl)phosphoramidic acid derivs., cellulose  
 fibers)  
 IT 933-20-0  
 (reaction of, with phosphorus pentachloride)

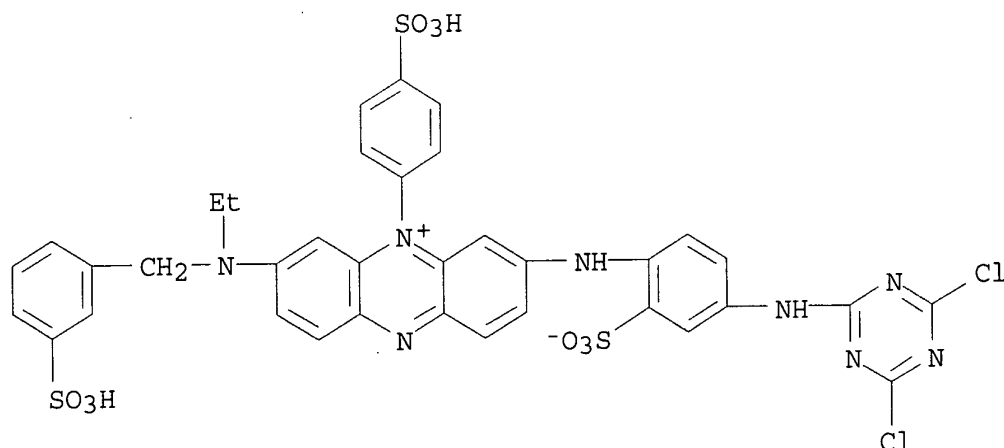
L60 ANSWER 36 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 79:127395 **Fiber**-reactive azine dyes. Crabtree, Allen  
 (Imperial Chemical Industries Ltd.). Ger. Offen. DE 2305990  
 19730816, 43 pp. (German). CODEN: GWXXBX. APPLICATION: DE  
 1973-2305990 19730207.

AB Eleven azine dyes (I) were prepd., where R = R1 = H or (RR1) =  
 benzo; R2 = phenylamino, N-ethylbenzylamino, or NEt2; one benzene  
 nucleus contains a chloro- or dichloro-s-triazinylamino group; and  
 the mol. contains .geq.1 other sulfo group. I dye  
**cellulosic textiles** fast, bright blue or reddish  
 blue shades. Thus, a soln. of CuSO4 in dil. NH4OH was added to  
 1,3,8-(PhNH)2C10H5SO3H, 4-H2NC6H4NHC6H3(SO3H)NH2-2,4, and Na2CO3 in  
 aq. alc., a slow stream of air passed through the stirred mixt. for  
 24 hr at 35-40.deg., and the pptd. aminophenazine deriv. treated  
 with 2,4-dichloro-6-(3-sulfophenylamino)-s-triazine in H2O at  
 35-40.deg. and pH 6-7 to give azine dye II [42783-17-5], blue on  
**cotton** and viscose **rayon**. The other I were  
 similarly prepd.

IT 42950-36-7P 43039-56-1P  
 (prepn. of)

RN 42950-36-7 HCA

CN Phenazinium, 3-[[4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-2-  
 sulfophenyl]amino]-7-[ethyl[(3-sulfophenyl)methyl]amino]-5-(4-  
 sulfophenyl)-, inner salt (9CI) (CA INDEX NAME)

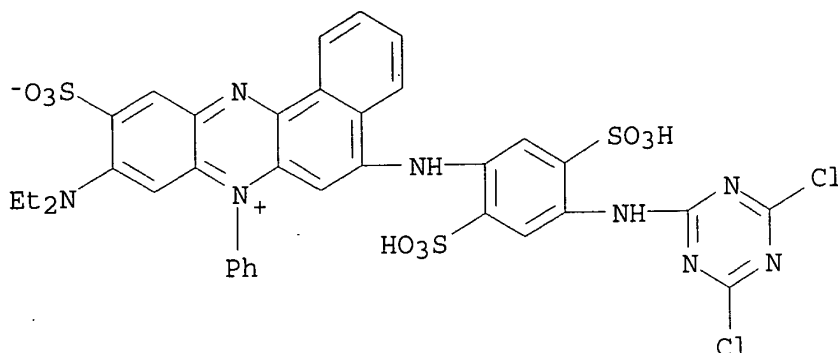


RN 43039-56-1 HCA

CN Benzo[a]phenazinium, 5-[[4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-  
 2,5-disulfophenyl]amino]-9-(diethylamino)-7-phenyl-10-sulfo-, inner



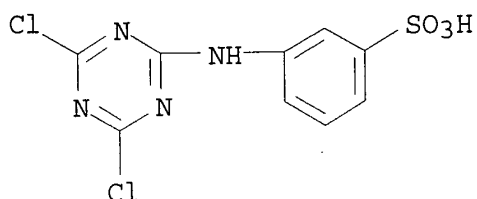
salt (9CI) (CA INDEX NAME)



IT 14121-39-2

(reaction of, with [(aminophenyl)amino]phenazine derivs.)

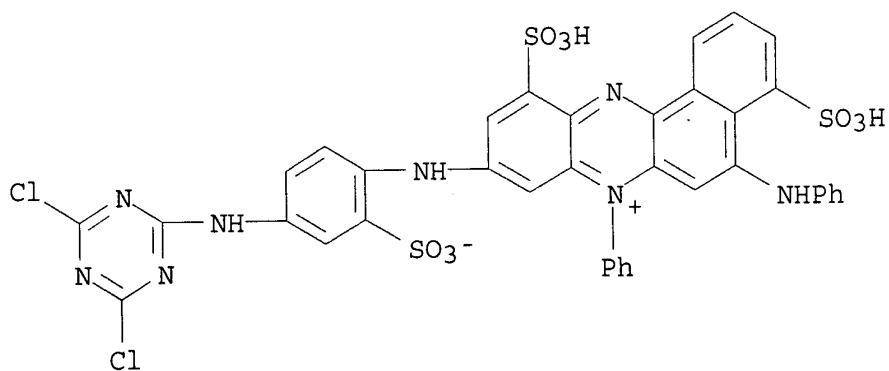
RN 14121-39-2 HCA

CN Benzenesulfonic acid, 3-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-  
(9CI) (CA INDEX NAME)

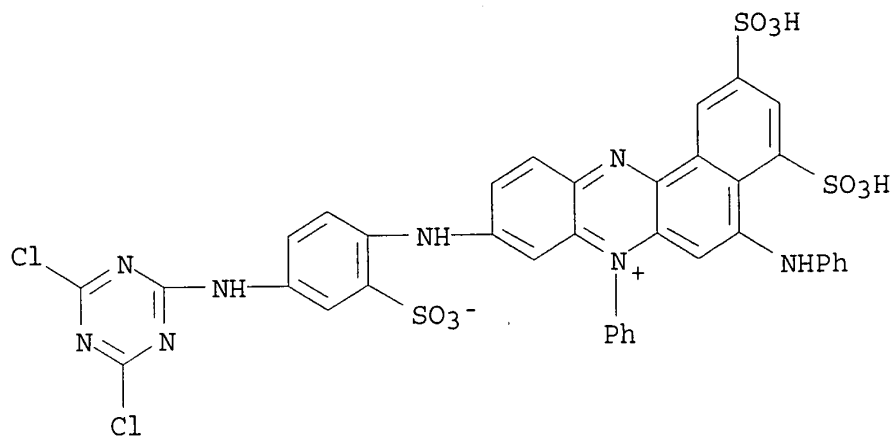
IT 42950-40-3

(reaction with aniline)

RN 42950-40-3 HCA

CN Benzo[a]phenazinium, 9-[[4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-  
2-sulfophenyl]amino]-7-phenyl-5-(phenylamino)-4,11-disulfo-, inner  
salt (9CI) (CA INDEX NAME)

IT 42950-42-5  
 (reaction with bis(aminosulfophenyl)urea)  
 RN 42950-42-5 HCA  
 CN Benzo[a]phenazinium, 9-[[4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-2-sulfophenyl]amino]-7-phenyl-5-(phenylamino)-2,4-disulfo-, inner salt (9CI) (CA INDEX NAME)



IC C09B  
 CC 40-6 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
 ST azine reactive dye; **fiber** reactive azine dye; phenazine reactive dye; **cellulose fiber** dye; chlorotriazine azine dye  
 IT Dyes, reactive  
 (diaminophenazine derivs., **cotton** and **rayon fibers**)  
 IT 42783-17-5P 42950-36-7P 42950-41-4P 42950-44-7P  
 42950-45-8P 43039-56-1P  
 (prepn. of)  
 IT 14121-39-2  
 (reaction of, with [(aminophenyl)amino]phenazine derivs.)  
 IT 42950-40-3  
 (reaction with aniline)  
 IT 42950-42-5  
 (reaction with bis(aminosulfophenyl)urea)  
 L60 ANSWER 37 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 75:152915 Antimicrobial finishing of **textile** materials.  
 Paulus, Wilfried; Pauli, Otto (Farbenfabriken Bayer A.-G.). Ger.  
 Offen. DE 1962899 19710624, 10 pp. (German). CODEN: GWXXBX.  
 APPLICATION: DE 1969-1962899 19691216.  
 AB The antimicrobial properties of **cotton** and other **textiles** are improved by treating with 2-5% aq. alk. solns. of acids and electrolytes to attach ionic groups onto the polymer and subsequently treating with cation-active microbicides, e.g., quaternary ammonium salts. **Cotton** was treated with an aq.

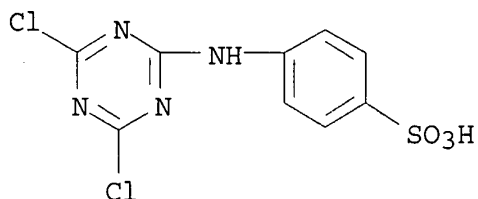
2% p-(4,6-dichloro-s-triazin-2-ylamino)benzoic acid suspension contg. 0.05% nonionic surfactant for 20 min and the soln. was treated with Na<sub>2</sub>CO<sub>3</sub> and NaCl. The **textile** was dried and soaked 30 min in a 40.degree. bath contg. 0.75% 3,4-dichlorobenzyl(dimethyl)dodecylammonium chloride. The **fabric** was dried and washed with an anionic active detergent. The **fabric** lost <3% tenacity after 14 days storage in compost. Other acidic reactants include ClCH<sub>2</sub>CO<sub>2</sub>H, HO<sub>2</sub>CC:CCO<sub>2</sub>H, and chloromethylphosphonic acid.

IT 16110-89-7 34350-23-7

(in microorganism control on **cotton textiles**  
by cation-active compds.)

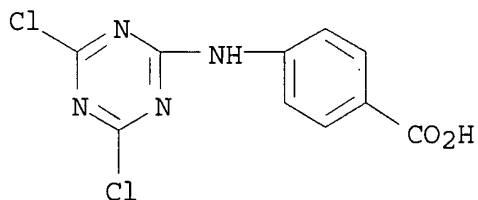
RN 16110-89-7 HCA

CN Benzenesulfonic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino] -  
(9CI) (CA INDEX NAME)



RN 34350-23-7 HCA

CN Benzoic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino] - (9CI) (CA  
INDEX NAME)



IC D06M

CC 39 (Textiles)

ST microbicide **textile** finishing; **cotton**

microbicide finishing; ammonium salt quaternary microbicide

IT Microorganisms

(control of, in **cotton textiles** by  
cation-active compds.)

IT **Textiles**

(microorganism control on **cotton**, by cation-active  
compds.)

IT 79-11-8, uses and miscellaneous 142-45-0 2565-58-4

16110-89-7 34350-23-7

(in microorganism control on **cotton textiles**  
by cation-active compds.)

IT 102-30-7 139-08-2 31796-10-8 31796-11-9 31981-11-0  
(microorganism control by, in **cotton textiles**  
contg. ionic groups)

L60 ANSWER 38 OF 42 HCA COPYRIGHT 2003 ACS on STN

75:37747 Permanent antimicrobial rot-proofing of anionic **textile** material. Paulus, Wilfried; Pauli, Otto (Farbenfabr. Bayer A.-G., Krefeld-Uerdingen, Fed. Rep. Ger.). Textilveredlung, 6(4), 217-24 (German) 1971. CODEN: TXLVAE. ISSN: 0040-5310.

GI For diagram(s), see printed CA Issue.

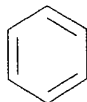
AB Anionic **cotton fabrics** were prepd. by treating **cotton fabric** with I[R = N(Bu)CH<sub>2</sub>CH<sub>2</sub>SO<sub>3</sub>Na, N(MeC<sub>6</sub>H<sub>4</sub>)CH<sub>2</sub>CH<sub>2</sub>SO<sub>3</sub>Na, NHC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Na-p, or NHC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>Na-p], ClCH<sub>2</sub>CO<sub>2</sub>H, ClCH<sub>2</sub>PO<sub>3</sub>H<sub>2</sub>, ClCH<sub>2</sub>POCl<sub>2</sub>, or HO<sub>2</sub>CC.tplbond.CCO<sub>2</sub>H and given washfast antimicrobial (rot-proof) finishes by treating with cationic germicides (e.g. alkyldimethylbenzylammonium chlorides and N-pentachlorophenylpolymethylenediamine salts). The cationic germicides were taken up better and more durably by the anionic **fiber** than by untreated **fabrics**. The anionic **fibers** themselves had no germicidal or bacteriostatic action and were not rot-proof.

IT 31778-98-0 31796-06-2 33377-86-5  
33463-43-3

(**cotton textiles** modified by, microorganism control in)

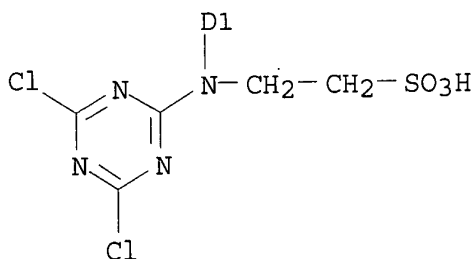
RN 31778-98-0 HCA

CN Taurine, N-(4,6-dichloro-s-triazin-2-yl)-N-tolyl-, sodium salt (8CI)  
(CA INDEX NAME)



D1-Me

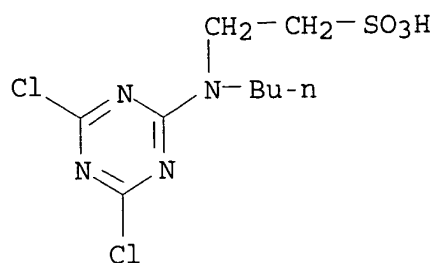
● Na



RN 31796-06-2 HCA

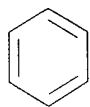
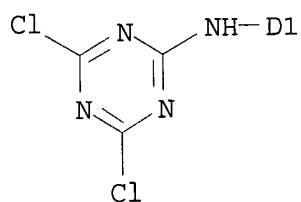
CN Taurine, N-butyl-N-(4,6-dichloro-s-triazin-2-yl)-, sodium salt (8CI)

(CA INDEX NAME)



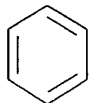
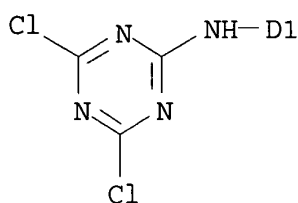
● Na

RN 33377-86-5 HCA  
 CN Benzenesulfonic acid, [(4,6-dichloro-1,3,5-triazin-2-yl)amino]-,  
 monosodium salt (9CI) (CA INDEX NAME)

D1-SO<sub>3</sub>H

● Na

RN 33463-43-3 HCA  
 CN Benzoic acid, [(4,6-dichloro-s-triazin-2-yl)amino]-, sodium salt  
 (8CI) (CA INDEX NAME)

D1-CO<sub>2</sub>H

● Na

- CC 39 (Textiles)  
 ST **cellulosic textile** rotproof; **cotton**  
**textile** rotproof; antimicrobial finish **cotton**; CM  
**cellulose** germicide reaction; germicide anionic  
**cellulose** reaction; **phosphonic** acid modified  
**cellulose**; chloroacetic acid modified **cellulose**;  
 triazinyltaurine modified **cellulose**; taurine modified  
**cellulose**; sulfonic acid modified **cellulose**;  
 aminobenzoic acid modified **cellulose**;  
 acetylenedicarboxylic acid modified **cellulose**;  
 benzylammonium chloride modified **cellulose**;  
 chlorophenylpolymethylenediamine modified **cellulose**;  
 washfastness antimicrobial finish
- IT Microorganisms  
 (control of, in anionic **cotton textiles**)
- IT **Textiles**  
 (microorganism control in anionic **cotton**)
- IT 79-11-8, uses and miscellaneous 142-45-0 1983-26-2 2565-58-4  
 31778-98-0 31796-06-2 33377-86-5  
 33463-43-3  
 (**cotton textiles** modified by, microorganism  
 control in)
- IT 31796-10-8 31796-11-9 31981-11-0 33377-87-6  
 (microorganism control by, on anionic **cotton**  
**textiles**)

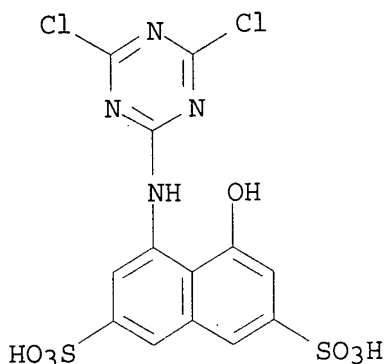
64:85061 Original Reference No. 64:16026g-h,16027a-e Reactive azo dyes. (Imperial Chemical Industries Ltd.). NL 6504418 19651008, 51 pp. (Unavailable). PRIORITY: GB 19640407.

GI For diagram(s), see printed CA Issue.

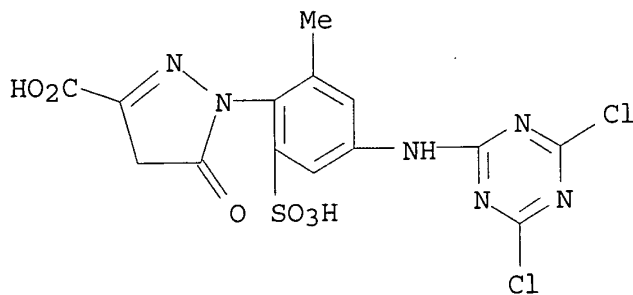
AB Reactive dyes for **cellulose textiles** were obtained by treating a suitable azo dye with a 2,4-dichloro-6-arylamino-s-triazine contg. .gtoreq. SO<sub>3</sub>H in the aryl group [or successively with cyanuric chloride (I) and an amino arene sulfonic acid] or by treating an azo component similarly and then diazotizing the product and coupling with a suitable component. 1,8,3,6-H<sub>2</sub>N(HO)C<sub>10</sub>H<sub>4</sub>(SO<sub>3</sub>Na)<sub>2</sub> (II) (18.15 parts) in 200 parts H<sub>2</sub>O added with stirring to 9.25 parts I in 60 parts Me<sub>2</sub>CO, 100 parts H<sub>2</sub>O, and 100 parts ice, stirred 1 hr. at 0-5.degree., treated with 9.75 parts m-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Na (III) in 100 parts H<sub>2</sub>O at 35-40.degree. while maintaining the pH at 7 with aq. Na<sub>2</sub>CO<sub>3</sub> gave a soln. of 1-[2-(3-sulfoanilino)-4-chloro-s-triazin-6-ylamino]-8-naphthol-3,6-disulfonic acid (IV). 2,4-(H<sub>2</sub>N)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>SO<sub>3</sub>H (V) (9.4 parts) in 100 parts H<sub>2</sub>O adjusted with 2N NaOH to pH 7, added with stirring to I 9.25 in Me<sub>2</sub>CO 60, H<sub>2</sub>O 100, and ice 100 parts, stirred 1 hr. at 0-5%, adjusted with 10% aq. Na<sub>2</sub>CO<sub>3</sub> to pH 6, treated at 35-40.degree. with 9.75 parts III in 100 cc. H<sub>2</sub>O at pH 7, cooled to 0.degree. diazotized and added to the soln. of IV, and the mixt. salted gave a dye. III 19.5, I 18.5, and 7,8,3,6,1-[5,2-H<sub>2</sub>N(NaO<sub>3</sub>S)C<sub>6</sub>H<sub>4</sub>N:N](HO)(NaO<sub>3</sub>S)<sub>2</sub>C<sub>10</sub>H<sub>3</sub>NH<sub>2</sub> (VI) 29.2 parts condensed gave a similar dye. VI 29.2, I 18.5, and III 19.5 parts condensed successively yielded the same dye. II 18.15 and I 9.25 parts condensed gave 1-(2,4-dichloro-s-triazin-6-ylamino)-8-naphthol-3,6-disulfonic acid (VII) which coupled with the diazotized condensation product from 9.4 parts V and 9.25 parts I and finally condensed with 19.5 parts III gave a dye. V (9.4 parts) condensed successively with 9.25 parts I and 9.75 parts III, diazotized, coupled with VII, and finally condensed with 9.75 parts III gave a dye. V (9.4 parts) diazotized and coupled with the condensation product from 18.15 parts II, 9.25 parts I, and 9.75 parts III, and the product coupled with an addnl. 9.75 parts III gave a dye. 5,2-AcNH(HO<sub>3</sub>S)C<sub>6</sub>H<sub>3</sub>NH<sub>2</sub> diazotized and coupled with 1-(2-methyl-3-amino-5-sulfophenyl)-3-carboxy-5-pyrazolone (VIII), and the soln. of the resulting diamino monoazo compd. (IX) (28.9 parts) condensed with the product from 19.5 parts III and 18.5 parts I yielded a dye. IX (28.9 parts) condensed successively with 18.5 parts I and 19.5 parts III gave a dye. The di-Na salt (17.8 parts) of VIII condensed successively with 9.25 parts I and 9.75 parts III gave 1-[2-methyl-3-[2-(m-sulfoanilino)-4-chloro-s-triazin-6-yl)amino]-5-sulfophenyl]-3-carboxy-5-pyrazolone (X), which, coupled with the diazotized condensation product from V 9.4, I 9.25, and III 9.75 parts, gave a dye. The di-Na salt (17.8 parts) of VIII was condensed with 9.25 parts I to yield 1-[2-methyl-3-(2,4-dichloro-s-triazin-6-ylamino)-5-sulfophenyl]-3-carboxy-5-pyrazolone (XI) which was coupled with the diazotized product from 9.4 parts V and 9.25 parts I. XI from the di-Na salt (17.8 parts) of VIII was coupled with the diazotized condensation product of 9.4 parts V, 9.25 parts I, and 9.75 parts III. X was coupled with the diazotized condensation product from V

and I, and the product condensed with III. I (7.4 parts) was condensed with 7.55 parts V and 7.5 parts 2,4-Me(NaO3S)C6H3NH2 (XII), and coupled with the diazotized condensation product from 7.8 parts I and 12.8 parts II, and the product heated 2 hrs. at 35-40.degree. with 35 parts 17% NH4OH to give the bluish red dye XIII [Ar = Ar1 = 2,5-Me(HO3S)C6H3]. A similar run in which the condensation product from I and II was treated at 35-40.degree. with 17% NH4OH and coupled with the diazotized condensation product from I, II, and XII yielded the bluish red dye XIII [Ar = H, Ar1 = 2,4,x-Me(HO3S)2C6H2].

- IT 7538-88-7, 2,7-Naphthalenedisulfonic acid, 4-[(4,6-dichloro-s-triazin-2-yl)amino]-5-hydroxy- 7538-90-1  
 , 2-Pyrazoline-3-carboxylic acid, 1-[3-[[4-chloro-6-(m-sulfoanilino)-s-triazin-2-yl]amino]-5-sulfo-o-tolyl]-5-oxo-  
 (azo dyes from)
- RN 7538-88-7 HCA  
 CN 2,7-Naphthalenedisulfonic acid, 4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-5-hydroxy- (9CI) (CA INDEX NAME)



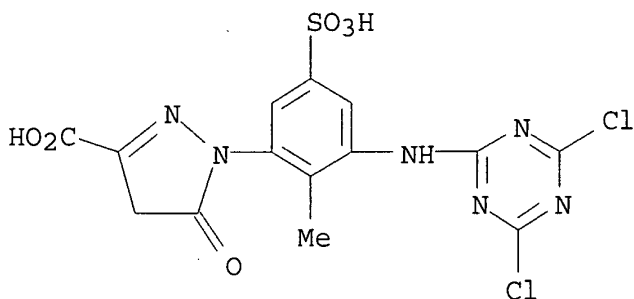
- RN 7538-90-1 HCA  
 CN 2-Pyrazoline-3-carboxylic acid, 1-[3-[[4-chloro-6-(m-sulfoanilino)-s-triazin-2-yl]amino]-5-sulfo-o-tolyl]-5-oxo- (7CI, 8CI) (CA INDEX NAME)



- IT 7538-91-2, 2-Pyrazoline-3-carboxylic acid, 1-[3-[(4,6-dichloro-s-triazin-2-yl)amino]-5-sulfo-o-tolyl]-5-oxo-



(prepn. of)  
 RN 7538-91-2 HCA  
 CN 2-Pyrazoline-3-carboxylic acid, 1-[3-[(4,6-dichloro-s-triazin-2-yl)amino]-5-sulfo-o-tolyl]-5-oxo- (7CI, 8CI) (CA INDEX NAME)



IC D06P  
 CC 46 (Dyes)  
 IT Dyes  
 (azo, **phosphono**-contg., metallizable)  
 IT **7538-88-7**, 2,7-Naphthalenedisulfonic acid, 4-[(4,6-dichloro-s-triazin-2-yl)amino]-5-hydroxy- 7538-89-8, 2,7-Naphthalenedisulfonic acid, 4-[[4-chloro-6-(m-sulfoanilino)-s-triazin-2-yl]amino]-5-hydroxy- **7538-90-1**, 2-Pyrazoline-3-carboxylic acid, 1-[3-[[4-chloro-6-(m-sulfoanilino)-s-triazin-2-yl]amino]-5-sulfo-o-tolyl]-5-oxo- 13598-36-2, **Phosphonic acid**  
 (azo dyes from)  
 IT 6012-54-0, 2,7-Naphthalenedisulfonic acid, 5-[[4-chloro-6-(m-sulfoanilino)-s-triazin-2-yl]amino]-3-[[5-[[4-chloro-6-(m-sulfoanilino)-s-triazin-2-yl]amino]-2-sulfophenyl]azo]-4-hydroxy-, penta-Na salt **7538-91-2**, 2-Pyrazoline-3-carboxylic acid, 1-[3-[(4,6-dichloro-s-triazin-2-yl)amino]-5-sulfo-o-tolyl]-5-oxo- 10359-99-6, 2,7-Naphthalenedisulfonic acid, 5-[[4-amino-6-chloro-s-triazin-2-yl]amino]-3-[[5-[[4-chloro-6-(5-sulfo-o-toluidino)-s-triazin-2-yl]amino]-2-sulfophenyl]azo]-4-hydroxy- 102853-49-6, 2,7-Naphthalenedisulfonic acid, 3-[[5-[[4-amino-6-chloro-s-triazin-2-yl]amino]-2-sulfophenyl]azo]-5-[[4-chloro-6-(disulfo-o-toluidino)-s-triazin-2-yl]amino]-4-hydroxy-, pentasodium salt  
 (prepn. of)

L60 ANSWER 40 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 59:16107 Original Reference No. 59:2977e-f,2978a-f p,p'-Diaminostilbene optical bleaching agents. Frey, Raymond (Compagnie Francaise des Matieres Colorantes). US 3045013 19620717, 7 pp. (Unavailable).  
 PRIORITY: FR 19580611.

GI For diagram(s), see printed CA Issue.

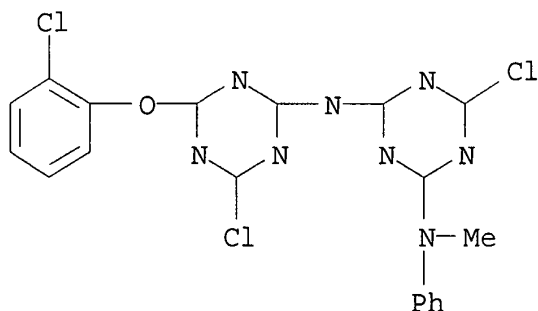
AB [4,2-H2(NaO3S)C6H3CH:]2 (I) is condensed with the condensation products of NH3 or Na2S, cyanuric chloride or bromide, amines, and phenols to give compds. of the general formula II, where Z is a divalent S, NH, or NH(CH2)2NH radical, X is morpholino, OH, PhO, or

NH(CH<sub>2</sub>)<sub>2</sub>OH, W is morpholino or PhNH, and Y is morpholino, PhNH, or o-ClC<sub>6</sub>H<sub>4</sub>O. II are optical bleaching agents stable to oxidn. and useful in detergents and washing powders. Thus, a soln. of cyanuric chloride (III) 370 in Me<sub>2</sub>CO 1110 is added to a neutral soln. of I 414 parts at 0-5.degree., the mixt. being kept weakly acidic by the addn. of 10% Na<sub>2</sub>CO<sub>3</sub>. The mixt. is heated at 30.degree., 170 parts 20% NH<sub>3</sub> is added, the mixt. is neutralized with 10% Na<sub>2</sub>CO<sub>3</sub>, and cooled to 0-5.degree.. A soln. of III 370 in Me<sub>2</sub>CO 1110 parts is added slowly with stirring at pH 5.5-6.6 (10% Na<sub>2</sub>CO<sub>3</sub>), and a suspension of 859 parts II (Z = NH, W = X = Cl) is obtained. PhNH<sub>2</sub>.HCl (518 parts) is added, the mixt. is heated at 40.degree. and kept weakly acidic by the addn. of 4240 parts 10% Na<sub>2</sub>CO<sub>3</sub>, agitated until the free PhNH<sub>2</sub> disappears, made alk. with 1060 parts 10% Na<sub>2</sub>CO<sub>3</sub>, heated at 90.degree., and stirred until the pH becomes neutral, and salted with 15% NaCl to give II (Z = NH, X = OH, W = Y = PhNH), a light yellow powder. Similarly prepd. are II (Z, X, Y, W, and appearance given): NH, NH(CH<sub>2</sub>)<sub>2</sub>OH, PhNH, PhNH, light yellow, NH, NH(CH<sub>2</sub>)<sub>2</sub>OH, morpholino, morpholino, light yellow, NH, OH, morpholino, morpholino, -; NH, morpholino, morpholino, morpholino, greenish yellow; NH(CH<sub>2</sub>)<sub>2</sub>NH, OH, morpholino, morpholino, faintly yellow; NH, PhO, morpholino, morpholino, slightly yellow; S, OH, morpholino, morpholino, light yellow. Also prepd. are IV and V. Washing powder 1000 contg. Na dodecylbenzenesulfonate 100, Na<sub>2</sub>CO<sub>3</sub> 600, Na **polyphosphate** 280, and carboxymethyl **cellulose** 20 parts, is mixed with 1 part II [Z = NH, X = NH(CH<sub>2</sub>)<sub>2</sub>OH, W = Y = PhNH], and **cotton fabric** is kept in a 1: 10 bath contg. 50 g. prepd. mixt. per 1. at the b.p. for 30 min. to give **fabric** with increased whiteness.

IT 100154-95-8, s-Triazine, 4-(o-chlorophenoxy)-4'-(N-methylanilino)-2,2'-iminobis[6-chloro- 101955-81-1, 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-chloro-6-[(4,6-dichloro-s-triazin-2-yl)amino]-s-triazin-2-yl]amino]- (prepn. of)

RN 100154-95-8 HCA

CN s-Triazine, 4-(o-chlorophenoxy)-4'-(N-methylanilino)-2,2'-iminobis[6-chloro- (7CI) (CA INDEX NAME)



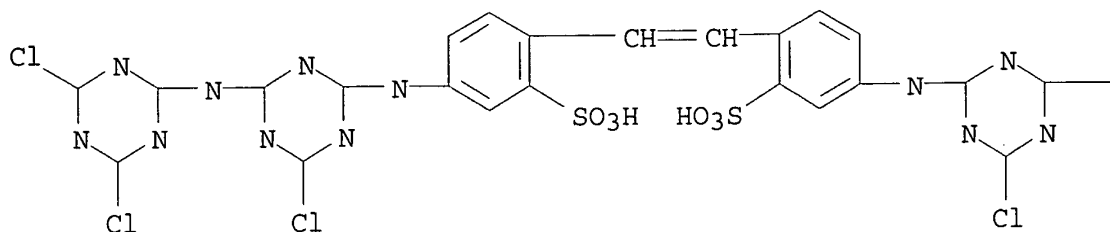
\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

RN 101955-81-1 HCA

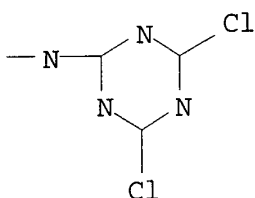
CN 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-chloro-6-[(4,6-dichloro-s-

triazin-2-yl)amino]-s-triazin-2-yl]amino]- (7CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

NCL 260240000

CC 46 (Dyes)

IT Bleaching agents

(fluorescent or optical, 4,4'-bis[[4-(triazinylamino)triazinyl]amino]-2,2'-stilbenedisulfonic acid derivs. as, for cotton and detergents)

IT 89381-74-8, Triazine, 2,2'-iminobis[4-chloro-6-morpholino-  
89417-05-0, s-Triazine, 2,2'-thiobis[4,6-dichloro- 93657-60-4,  
s-Triazine, 4-anilino-4'-phenoxy-2,2'-thiobis[6-chloro-  
**100154-95-8**, s-Triazine, 4-(o-chlorophenoxy)-4'-(N-  
methylanilino)-2,2'-iminobis[6-chloro- **101955-81-1**,  
2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-chloro-6-[(4,6-dichloro-s-  
triazin-2-yl)amino]-s-triazin-2-yl]amino]- 106322-22-9,  
2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[(4-hydroxy-6-morpholino-s-  
triazin-2-yl)amino]-6-morpholino-s-triazin-2-yl]amino]-, disodium  
salt 106385-15-3, 2,2'-Stilbenedisulfonic acid,  
4,4'-bis[[4-[(4-hydroxy-6-morpholino-s-triazin-2-yl)thio]-6-  
morpholino-s-triazin-2-yl]amino]-, disodium salt 106408-38-2,  
2,2'-Stilbenedisulfonic acid, 4-o-anisamido-4'-[[4-[(4-(o-  
chlorophenoxy)-6-morpholino-s-triazin-2-yl]amino-6-morpholino-s-  
triazin-2-yl]amino]-, disodium salt 106628-35-7,  
2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[(4,6-dimorpholino-s-  
triazin-2-yl)amino]-6-morpholino-s-triazin-2-yl]-amino]-, disodium  
salt 106631-81-6, 2,2'-Stilbenedisulfonic acid,  
4,4'-bis[[4-anilino-6-[(4-anilino-6-hydroxy-s-triazin-2-yl)amino]-s-

triazin-2-yl]amino]-, disodium salt 106884-61-1,  
 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[[2-[(4-hydroxy-6-morpholino-s-triazin-2-yl)amino]ethyl]amino]-6-morpholino-s-triazin-2-yl]amino]-, disodium salt 106906-37-0, 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-[[4-[(2-hydroxyethyl)amino]-6-morpholino-s-triazin-2-yl]amino]-6-morpholino-s-triazin-2-yl]amino]-, disodium salt 106978-52-3, 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-morpholino-6-[(4-morpholino-6-phenoxy-s-triazin-2-yl)amino]-s-triazin-2-yl]amino]-, disodium salt 106991-37-1, 2,2'-Stilbenedisulfonic acid, 4,4'-bis[[4-anilino-6-[[4-anilino-6-[(2-hydroxyethyl)amino]-s-triazin-2-yl]amino]-s-triazin-2-yl]amino]-, disodium salt 107660-31-1, 2,2'-Stilbenedisulfonic acid, 4,4'-[[[iminobis[6-[bis(2-hydroxyethyl)amino]-s-triazine-4,2-diyl]imino]]bis[4'-benzamido-(prepn. of)]

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59:9475 Original Reference No. 59:1788d-h Polymer-dye reaction products. (CIBA Ltd.). GB 900752 19620711, 17 pp. (Unavailable). PRIORITY: CH 19590212.

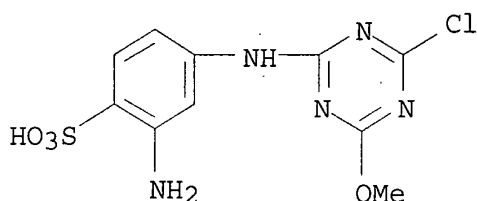
AB Compds. which contain a dye chem. bound to a polyhydroxylated material of high mol. wt., and which are sol. in aq. alkalies, can be used as pigments or for dyeing resin and glass **fibers** in fast, transparent colors. Thus, alkali-sol. Me **cellulose** (I) 10 was allowed to swell 30 min. in a suspension of 2-(3-amino-4-sulfoanilino)-4,6-dichloro-s-triazine (II) 1 in H<sub>2</sub>O 220, and then 15% NaOH 160 parts slowly added. The mixt. was stirred 1 hr. at room temp., neutralized with 2N HCl, and the ppt. filtered, washed, added to dil. HCl, diazotized and added to 1-(2-chloro-5-sulfophenyl)-3-methyl-5-pyrazolone (III) 4 and NaOAc 5 in H<sub>2</sub>O 300 parts. After 1 hr. the mixt. was filtered, and the pptd. washed to give a dark yellow product, sol. in 6-8% NaOH. Similarly, other compds. were prepd. (reactants and color given; C<sub>3</sub>N<sub>3</sub> is a s-triazinyl residue, Pc is a phthalocyanine residue): [hydroxyethyl **cellulose** (IV), 2,4,6-Cl[3,4-H<sub>2</sub>N(HO<sub>3</sub>S)C<sub>6</sub>H<sub>3</sub>NH](3-HO<sub>3</sub>SC<sub>6</sub>H<sub>4</sub>NH)C<sub>3</sub>N<sub>3</sub> (V)] .fwdarw. III, yellow; IV, 1-[(4,6-dichlorotriazin-2-yl)amino]anthraquinone, dark yellow; 3-ClC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> (VI) .fwdarw. [IV, 6,1,3-(4,6,2-Cl<sub>2</sub>C<sub>3</sub>N<sub>3</sub>NH)(HO)(HO<sub>3</sub>S)C<sub>10</sub>H<sub>5</sub> (VII)], dark red; IV, (2-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H .fwdarw. VII) (VIII), dark orange; IV, (one Cl of VIII replaced by 3-HO<sub>3</sub>SC<sub>6</sub>H<sub>4</sub>NH), dark orange; (I, V) .fwdarw. 1,8,3,6-BzNH(HO)(HO<sub>3</sub>S)2C<sub>10</sub>H<sub>4</sub> (IX), red; Cr complex of [1,2,6,4-H<sub>2</sub>N(HO)(O<sub>2</sub>N)(HO<sub>3</sub>S)C<sub>10</sub>H<sub>4</sub> .fwdarw. 6,1,3-[4,6,2-.mu.Cl(PhO)C<sub>3</sub>N<sub>3</sub>NH](HO)(HO<sub>3</sub>S)C<sub>10</sub>H<sub>5</sub>], I, grayish black; [2,4,6-Cl[3,4-H<sub>2</sub>N(HO<sub>3</sub>S)C<sub>6</sub>H<sub>3</sub>NH](MeO)C<sub>3</sub>N<sub>3</sub>, I] .fwdarw. IX, red; VI .fwdarw. [2,4,6-trichloropyrimidine, 1,8,3,6-H<sub>2</sub>N(HO)(HO<sub>3</sub>S)2C<sub>10</sub>H<sub>4</sub>], I, dark red; 2,4,5,6-tetrachloropyrimidine, 4-(3-amino-6-sulfophenylazo)-1-(2,5-dichloro-4-sulfophenyl)-3-methyl-5-pyrazolone, I, yellow; 1,2,3,6-HO[2,5-HO<sub>3</sub>S(ClCH<sub>2</sub>CH<sub>2</sub>CONH)C<sub>6</sub>H<sub>3</sub>N:N](HO<sub>3</sub>S)(ClCH<sub>2</sub>CH<sub>2</sub>CONH)C<sub>10</sub>H<sub>4</sub>, I, dark orange; 2,1,5,7-H<sub>2</sub>N[2,5-MeO(ClCH<sub>2</sub>CH<sub>2</sub>NHSO<sub>2</sub>)C<sub>6</sub>H<sub>3</sub>](HO<sub>3</sub>S)2C<sub>10</sub>H<sub>4</sub>, I, reddish yellow; 1-amino-4-[3-(.beta.-sulfatoethylsulfonyl)anilino]-2-anthraquinonesulfonic acid, I, dark blue; (4-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OSO<sub>3</sub>H, I) .fwdarw. 1,4-HO(HO<sub>3</sub>S)C<sub>10</sub>H<sub>6</sub>, dark red; 2,8,1,6-H<sub>2</sub>N(HO)[4,2 - (PhO<sub>2</sub>CNH)(HO<sub>3</sub>S)C<sub>6</sub>H<sub>3</sub>N:N](HO<sub>3</sub>S)C<sub>10</sub>H<sub>4</sub>, I,

dark red; 6,1,3,2-[(ClCH<sub>2</sub>CHOHCH<sub>2</sub>)<sub>2</sub>N] (HO) (HO<sub>3</sub>S) (2-HO<sub>3</sub>SC<sub>6</sub>H<sub>4</sub>N:N) C<sub>10</sub>H<sub>4</sub>, I, reddish brown; 1-(2,5-dichloro-4-sulfophenyl)-4-[4-[(2,6-dichloro-4-pyrimidinyl)carbonylamino]-2-sulfophenylazo]-3-methyl-5-pyrazolone, I, dark yellow; [carboxymethyl **cellulose** (X), V] (XI) .fwdarw. IX, red; XI .fwdarw. 2,5,7-AcNH(HO) (HO<sub>3</sub>S) C<sub>10</sub>H<sub>5</sub>, deep orange; XI, CuPc-(3)-(SO<sub>2</sub>Cl)<sub>4</sub> (XII), dark blue; 2,4,6-Cl(H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NH)[2,5-(HO<sub>3</sub>S)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>NH]C<sub>3</sub>N<sub>3</sub>, X, XII, dark blue; [poly(vinyl alc.), V] .fwdarw. [4-sulfo isomer of III], yellow; sol. starch, 8,1,2,3,6-(4,6,2-Cl<sub>2</sub>C<sub>3</sub>N<sub>3</sub>NH) (HO) (PhN:N) (HO<sub>3</sub>S)<sub>2</sub>C<sub>10</sub>H<sub>3</sub>, red; [IV, II] .fwdarw. IX, red; [I, II] (XIII) .fwdarw. IX, red; 1-[(.beta.-sulfatoethylsulfamoyl)phenyl]-4-[3-(.beta.-sulfatoethylsulfamoyl)-p-tolylazo]-3-methyl-5-pyrazolone, I, yellow. Also, diazotizable compds. similar to XIII were prepd. with dextrin, Na alginate, guaran, and **phosphonomethylated cotton**.

IT 15958-58-4, Benzenesulfonic acid, 2-amino-4-[(4-chloro-6-methoxy-s-triazin-2-yl)amino]-  
(reaction product with Me **cellulose**, azo dyes from)

RN 15958-58-4 HCA

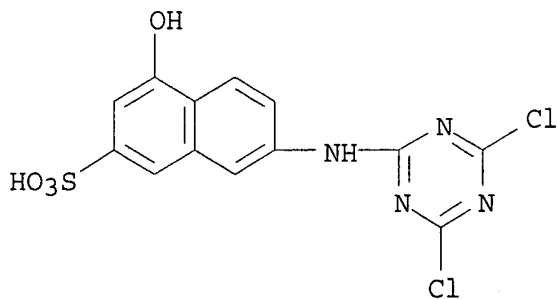
CN Benzenesulfonic acid, 2-amino-4-[(4-chloro-6-methoxy-1,3,5-triazin-2-yl)amino]- (9CI) (CA INDEX NAME)



IT 2673-76-9, 2-Naphthalenesulfonic acid, 7-[(4,6-dichloro-s-triazin-2-yl)amino]-4-hydroxy-  
(reaction product with **cellulose** ethers, azo dyes from)

RN 2673-76-9 HCA

CN 2-Naphthalenesulfonic acid, 7-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]-4-hydroxy- (9CI) (CA INDEX NAME)

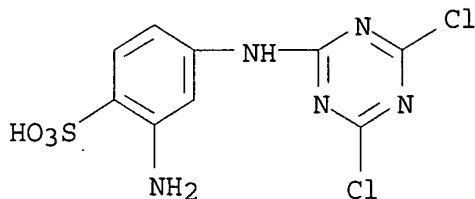


IT 15935-11-2, Benzenesulfonic acid, 2-amino-4-(4,6-dichloro-s-triazin-2-yl)amino]

(reaction product with cellulose ethers, azo pigments from)

RN 15935-11-2 HCA

CN Benzenesulfonic acid, 2-amino-4-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]- (9CI) (CA INDEX NAME)



CC 46 (Dyes)

IT Glass

(fibers or filaments of, polymer-dye reaction products as pigments for)

IT Cellulose ethers

(reaction products with dyes, as pigments)

IT Anthraquinone, 1-[(4,6-dichloro-s-triazin-2-yl)amino]-, compd. with hydroxyethyl cellulose (pigments from)

IT 1,3-Naphthalenedisulfonic acid, 6-amino-5-[[5-[(2-chloroethyl)sulfamoyl]-2-methoxyphenyl]azo]-

1-Naphthalenesulfonic acid, 4-[[6-[(4-chloro-6-phenoxy-s-triazin-2-yl)amino]-1-hydroxy-3-sulfo-2-naphthyl]azo]-3-hydroxy-7-nitro-, chromium complex

2,7-Naphthalenedisulfonic acid, 3-[(m-chlorophenyl)azo]-5-[(2,6-dichloro-4-pyrimidinyl)amino]-4-hydroxy-

2,7-Naphthalenedisulfonic acid, 5-benzamido-3-[[5-[(4-chloro-6-methoxy-s-triazin-2-yl)amino]-2-sulfophenyl]azo]-4-hydroxy-

2-Naphthalenesulfonic acid, 7-(3-chloropropionamido)-3-[[5-(3-chloropropionamido)-2-sulfophenyl]azo]-4-hydroxy-

2-Naphthalenesulfonic acid, 7-[bis(3-chloro-2-hydroxypropyl)amino]-4-hydroxy-3-[(o-sulfophenyl)azo]-

Carbanilic acid, 4-[(2-amino-8-hydroxy-6-sulfo-1-naphthyl)azo]-3-sulfo-, phenyl ester

o-Toluenesulfonamide, N-(2-hydroxyethyl)-5-[[1-[[2-hydroxyethyl)sulfamoyl]phenyl]-3-methyl-5-oxo-2-pyrazolin-4-yl]azo]-, bis(hydrogen sulfate)

(reaction product with Me cellulose, as pigment)

IT 2-Naphthalenesulfonic acid, 7-acetamido[[5-[[4-chloro-6-(m-sulfoanilino)-s-triazin-2-yl]amino]-2-sulfophenyl]azo]-4-hydroxy-

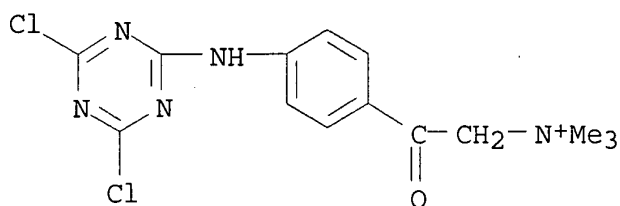
3,3',3'',3'''-Phthalocyaninetetrasulfonamide, N,N',N'',N'''-tetrakis[2-[[4-chloro-6-(2,5-disulfoanilino)-s-triazin-2-yl]amino]ethyl]-, copper complex

3,3',3'',3'''-Phthalocyaninetetrasulfonamide, N,N',N'',N'''-tetrakis[5-[[4-chloro-6-(m-sulfoanilino)-s-triazin-2-yl]amino]-2-sulfophenyl]-, copper complex

Copper, [dihydrogen N,N',N'',N'''-tetrakis[2-[[4-chloro-6-(2,5-

- disulfoanilino)-s-triazin-2-yl]amino]ethyl]-3,3',3'',3'''-phthalocyaninetetrasulfonamidato(2-))-  
 Copper, [dihydrogen N,N',N'',N'''-tetrakis[5-[[4-chloro-6-(m-sulfoanilino)-s-triazin-2-yl]amino]-2-sulfophenyl]-3,3',3'',3'''-phthalocyaninetetrasulfonamidato(2-))]-  
 (reaction product with carboxymethyl cellulose, as pigment)
- IT 2,7-Naphthalenedisulfonic acid, 4-benzamido-6-[[5-[(4,6-dichloro-s-triazin-2-yl)amino]-2-sulfophenyl]azo]-5-hydroxy-  
 (reaction product with cellulose ethers, as pigments)
- IT Benzenesulfonic acid, 2'-amino-3,4'-[(6-chloro-s-triazine-2,4-diyl)diimino]di-  
 (reaction product with cellulose ethers, azo pigments from)
- IT 2-Naphthalenesulfonic acid, 7-[[4-chloro-6-(m-sulfoanilino)-s-triazin-2-yl]amino]-4-hydroxy-3-[(o-sulfophenyl)azo]-  
 Benzenesulfonic acid, 2'-[[1-(2-chloro-5-sulfophenyl)-3-methyl-5-oxo-2-pyrazolin-4-yl]azo]-3,4'-[(6-chloro-s-triazine-2,4-diyl)diimino]di-  
 (reaction product with hydroxyethyl cellulose, as pigment)
- IT 2-Naphthalenesulfonic acid, [(m-chlorophenyl)azo]-7-[(4,6-dichloro-s-triazin-2-yl)amino]-4-hydroxy-  
 (reaction product with hydroxyethyl cellulose, as pigments)
- IT 2,7-Naphthalenedisulfonic acid, 5-benzamido-3-[[5-[[4-chloro-6-(m-sulfoanilino)-s-triazin-2-yl]amino]-2-sulfophenyl]azo]-4-hydroxy-  
 (reaction products with cellulose ethers, as pigment)
- IT 1-Naphthalenesulfonic acid, 4-hydroxy[[p-[(2-hydroxyethyl)sulfonyl]phenyl]azo]-, hydrogen sulfate  
 (reaction with product with Me cellulose, as pigment)
- IT Chromium compounds  
 (with azo dyes, reaction product with cellulose ethers, as pigments)
- IT 6522-74-3, 2-Naphthalenesulfonic acid, 7-[(4,6-dichloro-s-triazin-2-yl)amino]-4-hydroxy-3-[(o-sulfophenyl)azo]-  
 (reaction product with (hydroxyethyl)cellulose, as pigments)
- IT 4777-26-8, Sulfanilic acid, 2-[[1-(2-chloro-5-sulfophenyl)-3-methyl-5-oxo-2-pyrazolin-4-yl]azo]-N-[(2,4-dichloro-5-pyrimidinyl)carbonyl]-  
 6522-88-9, 2-Anthracesulfonic acid, 1-amino-9,10-dihydro-4-[m-[(2-hydroxyethyl)sulfonyl]anilino]-9,10-dioxo-, hydrogen sulfate  
 (reaction product with Me cellulose, as pigment)
- IT 15958-58-4, Benzenesulfonic acid, 2-amino-4-[(4-chloro-6-methoxy-s-triazin-2-yl)amino]- 15958-59-5, 2,7-Naphthalenedisulfonic acid, 4-[(2,6-dichloro-4-pyrimidinyl)amino]-5-hydroxy-  
 (reaction product with Me cellulose, azo dyes from)
- IT 14847-61-1, p-Benzenedisulfonic acid, 2-[[4-[(2-aminoethyl)amino]-6-chloro-s-triazin-2-yl]amino]-  
 (reaction product with carboxymethyl cellulose, in phthalocyanine dye prepn.)

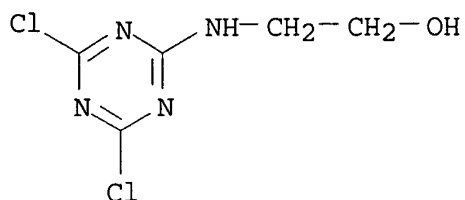
- IT 2673-76-9, 2-Naphthalenesulfonic acid, 7-[(4,6-dichloro-s-triazin-2-yl)amino]-4-hydroxy-  
(reaction product with **cellulose** ethers, azo dyes from)
- IT 15935-11-2, Benzenesulfonic acid, 2-amino-4-(4,6-dichloro-s-triazin-2-yl)amino]  
(reaction product with **cellulose** ethers, azo pigments from)
- L60 ANSWER 42 OF 42 HCA COPYRIGHT 2003 ACS on STN  
56:19164 Original Reference No. 56:3681c-e Treatment of **cellulosic textiles**. Sause, Robert; Stephen, William E. (Imperial Chemical Industries Ltd.). GB 869660 (Unavailable). APPLICATION: GB 19581212.
- AB Addn. to Brit. 794,180 (CA 52, 19155). **Cotton** and viscose **cloth** are treated under aq. alk. conditions (NaHCO<sub>3</sub> or Na<sub>2</sub>CO<sub>3</sub>) with a nondye compd. or a mixt. of these which contains at least one 1,3,5-triazine ring, the C atoms of which carry as substituents 2 halogen atoms and a residue of a primary or secondary amine bound by the N atom and contg. at least 1 positively charged solubilizing group or at least 1 nonionic solubilizing group. The positively charged solubilizing group may be a quaternary ammonium or **phosphonium** group and the nonionic group may be a poly(alkylene oxide) residue or a sugar residue. The **cloth** was imparted improved resistance to attack by microorganisms, improved softness, H<sub>2</sub>O repellency, and antisoiling properties.
- IT 13734-07-1, Ammonium, [p-[(4,6-dichloro-s-triazin-2-yl)amino]phenacyl]trimethyl, chloride  
(in **cotton** treatment for mildew and rot resistance)
- RN 13734-07-1 HCA  
CN Ammonium, [p-[(4,6-dichloro-s-triazin-2-yl)amino]phenacyl]trimethyl-, chloride (8CI) (CA INDEX NAME)



● Cl<sup>-</sup>

- IT 13734-08-2, Ethanol, 2-[(4,6-dichloro-s-triazin-2-yl)amino]-  
(in **cotton** treatment for seil resistance)
- RN 13734-08-2 HCA  
CN Ethanol, 2-[(4,6-dichloro-1,3,5-triazin-2-yl)amino]- (9CI) (CA INDEX NAME)

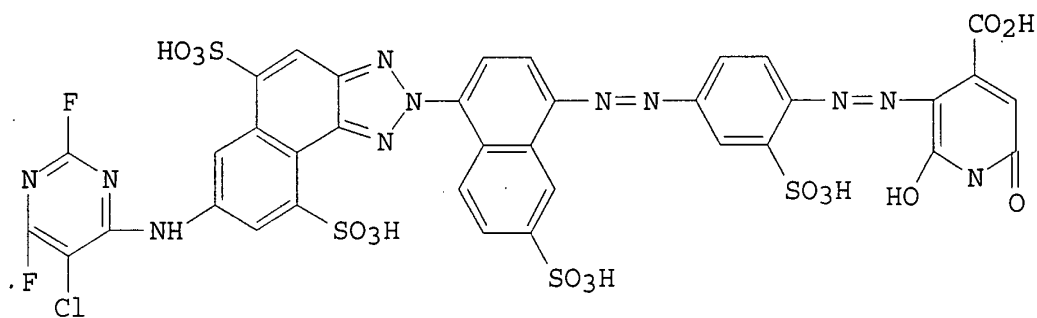
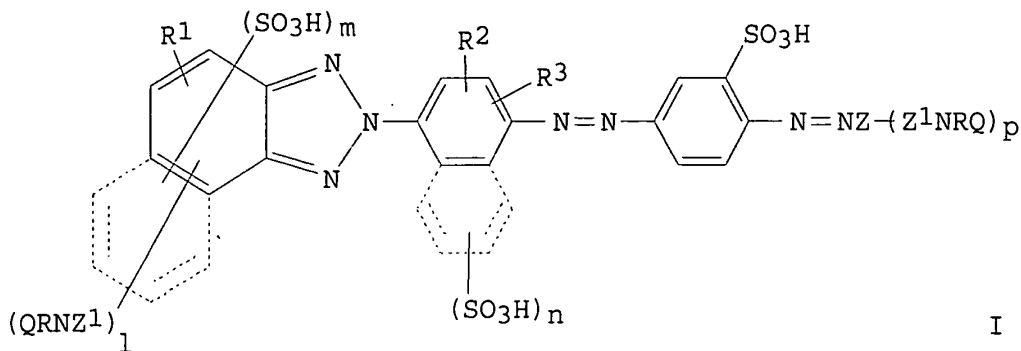




- CC 48 (Textiles)  
 IT Waterproofing  
     (of **cotton** and **rayon** by s-triazine aminated halo derivs.)  
 IT Microorganisms  
     (textile proofing against, by s-triazine aminated halo derivs.)  
 IT **Textiles**  
     (s-triazine aminated halo derivs. in improving softness and resistance to microorganisms, soiling and water)  
 IT **Rayon**  
     (s-triazine aminated halo derivs. in improving softness and resistance to microorganisms, soiling and water of)  
 IT Ammonium, [[(4,6-dichloro-s-triazin-2-yl)amino]ethyl]diethyloctadecyl, bromide  
     (for softening **rayon**)  
 IT 290-87-9, s-Triazine  
     (amino halo derivs., improving **cotton** and **rayon** softness and resistance to microorganisms, soiling and water by)  
 IT **13734-07-1**, Ammonium, [p-[(4,6-dichloro-s-triazin-2-yl)amino]phenacyl]trimethyl, chloride  
     (in **cotton** treatment for mildew and rot resistance)  
 IT **13734-08-2**, Ethanol, 2-[(4,6-dichloro-s-triazin-2-yl)amino]-  
     (in **cotton** treatment for seil resistance)

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L61 ANSWER 1 OF 10 HCA COPYRIGHT 2003 ACS on STN  
 102:8238 Reactive azo dyes. Henk, Hermann (Bayer A.-G. , Fed. Rep. Ger.). Ger. Offen. DE 3306696 A1 19840830, 42 pp. (German).  
 CODEN: GWXXBX. APPLICATION: DE 1983-3306696 19830225.  
 GI



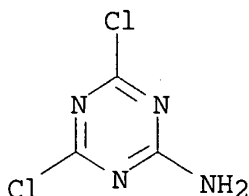
AB Fast yellow to red or brown dyes (I) for **cellulose fibers** are prepd., where Z = coupling component residue; Z1 = direct bond or bridging member (to C atom of Z); R and R1 = H or (un)substituted C1-4 alkyl; R2 and R3 = H, or (un)substituted C1-4 alkyl, C1-4 alkoxy, C1-4 alkylcarbonylamino, carboxy, halogen, OH, or sulfo; Q = **fiber**-reactive residue; l, n, and p = 0 or 1; and m = 1, 2, or 3. I can also contain a complexed metal atom. Thus, diazotization of 4-(oxalylamino)-3-sulfoaniline [6364-15-4], coupling with 1,6-H2NC10H6SO3H [119-79-9], diazotization, coupling with 1,6-(H2N)2C10H4(SO3H)2-4,8 [19659-81-5], triazolization, sapon. of the oxalyl group, reaction with 5-chloro-2,4,6-trifluoropyrimidine [697-83-6], diazotization, and coupling with 2-hydroxy-6-pyridone-4-carboxylic acid [99-11-6] gave II [93696-27-6] ( $\lambda_{\text{max}}$  470 nm), a wet- and lightfast scarlet dye for **cotton** and **rayon**. Numerous other I were similarly prepd.

IT 933-20-0

(reaction of, with amino azo dye)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC C09B062-01; C09B031-02; C09B045-24; D06P001-38  
 CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
 IT Dyes, reactive  
     (disazo compds. contg. triazole moiety, for **cellulose fibers**)  
 IT 93696-27-6  
     (dye, for **cellulosic fibers**)  
 IT 93695-91-1P 93695-92-2P 93695-93-3P 93695-94-4P 93695-95-5P  
 93695-96-6P 93695-97-7P 93695-98-8P 93695-99-9P 93696-00-5P  
 93696-01-6P 93696-02-7P 93696-03-8P 93696-04-9P 93696-05-0P  
 93696-06-1P 93696-07-2P 93696-08-3P 93696-09-4P 93696-10-7P  
 93696-11-8P 93696-12-9P 93696-13-0P 93696-14-1P 93696-15-2P  
 93696-16-3P 93696-17-4P 93696-18-5P 93696-19-6P 93696-20-9P  
 93746-41-9P 93834-36-7P 93834-37-8P  
     (prepn. of, as reactive dye for **cotton**)  
 IT 93695-90-0P  
     (prepn. of, as reactive dye for **cotton** and **rayon**)  
 IT **933-20-0** 1652-36-4 1919-43-3 67027-18-3 93696-21-0  
 93696-22-1 93696-23-2 93696-24-3  
     (reaction of, with amino azo dye)

L61 ANSWER 2 OF 10 HCA COPYRIGHT 2003 ACS on STN  
 98:181116 Reactive azo dyes. Gati, Sandor (Ciba-Geigy A.-G. , Switz.).  
 Patentschrift (Switz.) CH 634094 A 19830114, 10 pp. (German).  
 CODEN: SWXXAS. APPLICATION: CH 1978-1512 19780210.  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB **Fiber**-reactive dyes of general structure I are prepd.,  
 where R = H, sulfo, carboxy, halogen, alkyl, alkoxy, NO<sub>2</sub>, CN, OH,  
 PhO, alkoxy-carbonyl, or carbamoyl; R<sub>1</sub>, R<sub>2</sub>, and R<sub>3</sub> = H or alkyl; R<sub>4</sub> =  
 halogen, amino, alkoxy, aryloxy, alkylthio, or arylthio; one R<sub>5</sub> =  
 halogen or quaternary ammonium and the other R<sub>5</sub> = halogen, amino,  
 alkoxy, aryloxy, alkylthio, arylthio, or NR<sub>1</sub>Q (R<sub>1</sub> as defined above;  
 Q is the same monoazo Cu complex chromophore shown in the  
 structure); and R<sub>6</sub> = carboxy or sulfo. I are esp. useful as reddish

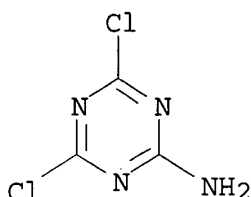
blue dyes for **cotton**. Thus, reaction of 1,4-phenylenediamine-2,5-disulfonic acid [7139-89-1] with 2-amino-4,6-dichloro-s-triazine [933-20-0], cyanuric chloride [108-77-0], and then 1-amino-7-(5'-amino-2'-hydroxyphenylazo)-8-naphthol-2,3',4-trisulfonic acid [85508-86-7], followed by copperization, gave dye II [85490-82-0].

IT 933-20-0

(reaction of, with diaminobenzenedisulfonic acid)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC C09B062-095

CC 41-3 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

ST copper complex reactive dye; chlorotriazine reactive dye; azo reactive dye; bifunctional reactive dye; **cotton** reactive dye

IT Dyes, reactive

(azo copper complexes, contg. two chlorotriazine groups, for **cotton** and **rayon**)

IT 85490-81-9P

(manuf. of, as reactive dye for **cellulosic fibers**)

IT 85490-80-8P 85490-82-0P

(manuf. of, as reactive dye for **cotton**)

IT 933-20-0 6684-27-1 85490-78-4

(reaction of, with diaminobenzenedisulfonic acid)

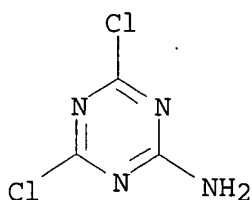
L61 ANSWER 3 OF 10 HCA COPYRIGHT 2003 ACS on STN

92:112196 Improving the color yield and fastness properties of dyeings produced with anionic dyes on **cellulose fiber** material and cationic **fiber**-reactive compounds. Perrin, Pierre; Hegar, Gert; Siegrist, Gerald; Seiler, Herbert; Horn, Ulrich (Ciba-Geigy Corp., USA). U.S. US 4180664 19791225, 9 pp. (English). CODEN: USXXAM. APPLICATION: US 1977-805208 19770609.

AB Reactive quaternized triazine deriv. fixing agents improved the color yield and wet fastness of **cellulosic textiles** dyed with anionic dyes and was particularly effective with substantive dyes without decreasing lightfastness. **Cotton textiles** were dipped into a dye bath contg. 40 g [3-[(4-chloro-6-methoxytriazin-2-yl)amino]propyl]trimethylammonium chloride [66006-48-2], 185 mL water, 15 mL 30% NaOH, and 800 mL of a soln. of a blue direct dye (C.I. 24 401), squeezed to a pickup

of 75%, rolled up, wrapped 6 h at room temp. in a plastic sheet, rinsed, and dried to give a level deep bluish-green dyeing of good wash- and lightfastness.

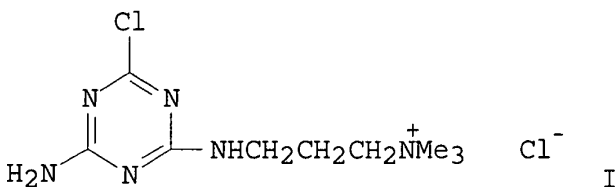
IT 933-20-0  
(reaction of, with trimethylpropylenediammonium dichloride)  
RN 933-20-0 HCA  
CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC C07D251-50; C07D251-42; C07D251-22  
NCL 544194000  
CC 39-7 (Textiles)  
ST fixing agent anionic dye **cotton**; quaternary fixing agent  
anionic dye; triazine fixing agent anionic dye; reactive fixing  
anionic dye  
IT Dyeing  
(of **cellulosic textiles** with anionic dyes,  
reactive quaternary triazine derivs. fixing agents for)  
IT 66006-44-8 66006-45-9 66006-46-0 66006-47-1 66006-48-2  
(fixing agents, in anionic dyeing of **cellulosic  
fibers**)  
IT 933-20-0 1652-36-4  
(reaction of, with trimethylpropylenediammonium dichloride)

L61 ANSWER 4 OF 10 HCA COPYRIGHT 2003 ACS on STN  
89:112158 **Fiber**-reactive cationic compounds and anionic dyes  
for improving the tinctorial yield and the fastness of dyeings  
obtained on **cellulosic fibrous** materials.  
(Ciba-Geigy A.-G., Switz.). Belg. BE 855699 19771215, 28 pp.  
(French). CODEN: BEXXAL. APPLICATION: BE 1977-178451 19770615.

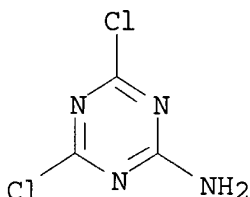
GI



AB Compds. contg. a **fiber**-reactive **cellulosic  
fiber** group (halotriazine) and trimethylammonium group(s)

were prep'd. **Cellulosic fibers** were heated with these compds., fixed, and the resulting **fibers** dyed with dyes contg. SO<sub>3</sub>H groups to give deep, fast dyeings. A typical reactive compd. is I [66006-44-8].

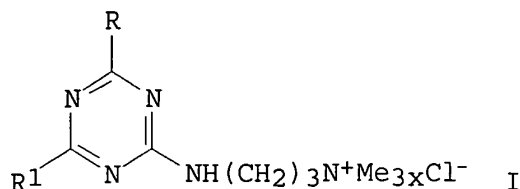
IT 933-20-0  
(reaction of, with ethylenediamine deriv.)  
RN 933-20-0 HCA  
CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC D06P  
CC 39-7 (Textiles)  
ST reactive bridging anionic dyeing; **cellulosic fiber** dyeing; ammonium group **cellulosic** dyeing  
IT Dyeing  
(of **cellulosic fibers**, with anionic dyes, modification with trimethylammonium compds. for)  
IT 66006-44-8  
(**cellulose fibers** modification by, for improved dyeing with anionic dyes)  
IT 66006-45-9 66006-46-0 66006-48-2  
(**cellulose fibers** modification with, for improved dyeing with anionic dyes)  
IT 66006-47-1  
(**cellulosic fibers** modification by, for dyeing with anionic dyes)  
IT 933-20-0  
(reaction of, with ethylenediamine deriv.)

L61 ANSWER 5 OF 10 HCA COPYRIGHT 2003 ACS on STN  
88:137842 Cationic fast reactive compounds for improvement of the yield and fastness of colors produced on **cellulose fibers** by anionic dyes. Perrin, Pierre; Hegar, Gert; Siegrist, Gerald; Seiler, Herbert; Horn, Ulrich (Ciba-Geigy A.-G., Switz.). Ger. Offen. DE 2726433 19771229, 37 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1977-2726433 19770611.

GI



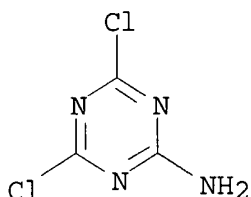
AB **Cellulosic textiles** are treated, before, during, or after dyeing, with a cationic, **fiber-reactive** compd. having the formula I (R = Cl or F; R1 = MeO, H2N, Me2CHO, or Me3N+(CH2)3NH; x = 1 or 2) to improve the wetfastness and yields of dyeings produced with anionic dyes. Thus, 40 g (I; R = Cl; R1 = MeO, x = 1) [66006-48-2] was dissolved in 185 mL H2O and 15 mL 30% NaOH and a soln. of 20 % blue direct dye C.I. 24401 in 800 mL water was added to the soln. A mercerized **cotton fabric** was padded with the soln., squeezed to give a 75% take-up, wrapped in a plastic film, and stored 6 h at room temp. The **fabric** was rinsed in cold and boiling water and dried to give a level deep blue-green-dyed **fabric** with good wash- and lightfastness.

IT 933-20-0

(reaction of, with quaternary ammonium chloride)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC C07D251-00

CC 39-7 (Textiles)

ST fixing agent dyeing **cotton**; triazine deriv dyeing assistant; quaternary ammonium triazine deriv

IT Dyeing

(of **cotton** and **cotton-polyester**

**textiles**, with anionic dye, fixing agents for)

IT Quaternary ammonium compounds, uses and miscellaneous (triazine deriv., fixing agents, for dyeing of **cellulosic textiles** with anionic dyes)

IT 66006-44-8 66006-45-9 66006-46-0 66006-47-1 66006-48-2 (fixing agents, for dyeing **cellulosic textiles** with anionic dyes)

IT 108-77-0 933-20-0 1652-36-4 3638-04-8 6684-27-1 (reaction of, with quaternary ammonium chloride)

L61 ANSWER 6 OF 10 HCA COPYRIGHT 2003 ACS on STN

81:14993 Activators for bleaching agents. Sugano, Junichiro; Kakuda, Minoru; Tsuiki, Tokuzo (Mitsubishi Gas Chemical Co., Inc.). Ger. Offen. DE 2338326 19740214, 11 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1973-2338326 19730727.

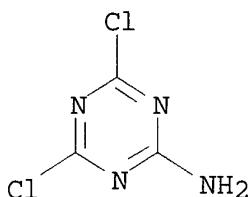
AB The bleaching power of peroxides was raised by addn. of 2-chloro-s-triazine derivs. in amts. according to 1 Cl atom/atom active O. Thus, **cotton fabrics** soiled with instant coffee were treated 15 min at 40.deg. with a cleaning soln. contg. 0.2 % 25:25:50 Na dodecylbenzenesulfonate-Na5P3O10-Na2SO4 detergent, Na perborate tetrahydrate [10486-00-7] in amts. corresponding to 50 ppm active O, and 6-amino-2,4-dichloro-s-triazine (I) [933-20-0] to give bleaching power 69.7 % immediately and 61.1 % 4 weeks after prepn. of the cleaning soln. vs. 55.0 % and 54.0 %, resp., for a I-free soln.

IT 933-20-0

(activators, for peroxide bleaching agents)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC D06L

CC 46-6 (Surface Active Agents and Detergents)

ST activator bleaching agent chlorotriazine; triazine chloro activator bleaching; **cotton textile** bleaching activator; aminochlorotriazine activator bleaching agent; peroxide bleaching activator

IT 933-20-0 2401-64-1 2911-36-6 3140-73-6 3397-62-4  
3638-04-8 27282-80-0

(activators, for peroxide bleaching agents)

L61 ANSWER 7 OF 10 HCA COPYRIGHT 2003 ACS on STN

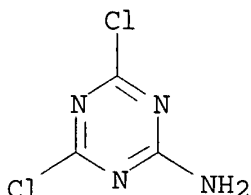
68:30937 Amination of **cellulose fibers** by 2-amino-4,6-dichloro-s-triazine. Ishikawa, Tomomichi; Ishii, Toichiro; Takeuchi, Masahiro; Kano, Tateo (Tokyo Metropol. Univ., Tokyo, Japan). Yuki Gosei Kagaku Kyokaishi, 25(8), 686-90 (Japanese) 1967. CODEN: YGKKAE. ISSN: 0037-9980.

AB Studies were made of the dyeing properties of **cotton** by introducing NH2 groups. The hydrolysis of an aminating agent [2-amino-4,6-dichloro-s-triazine (I)] and the most suitable conditions for its treatment in an Me2CO-H2O mixt. in the presence of Na2CO3 was established. The hydrolysis of I was accelerated by the HCl formed in the reaction. The hydrolysis in Na2CO3 soln. was a second-order reaction and the activation energy was 19.5



kcal./mole. When **cotton** was treated with I (0.08 mole/l. I, 0.16 mole/l. Na<sub>2</sub>CO<sub>3</sub>, bath ratio 1:50, and at 20.degree. for 24 hrs.), an aminized **cotton** contg. 0.43% N was obtained. The **cotton** thus treated can be dyed with acid dyes and the fastness against washing of the dyed **cotton** is improved.

IT 933-20-0  
(as amination agent for **cotton**)  
RN 933-20-0 HCA  
CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



CC 39 (Textiles)  
ST AMINATION **COTTON FIBER**; **FIBER**  
**COTTON** AMINATION; TRIAZINES AMINATION **COTTON**;  
**COTTON FIBER** AMINATION; **CELLULOSE**  
**FIBER** AMINATION  
IT **Textiles**  
(amination of **cotton**, with 2-amino-4,6-dichloro-s-triazine)  
IT **Cotton**  
(amination of, with 2-amino-4,6-dichloro-s-triazine)  
IT Amination  
(of **cotton**, with 2-amino-4,6-dichloro-s-triazine)  
IT Dyeing  
(properties, of **cotton textiles**, improvement  
by amination with 2-amino-4,6-dichloro-s-triazine)  
IT 933-20-0  
(as amination agent for **cotton**)

L61 ANSWER 8 OF 10 HCA COPYRIGHT 2003 ACS on STN

56:19192 Original Reference No. 56:3686i,3687a-b Dyeing of  
**cellulosic textile** materials. (CIBA Ltd.). GB  
867521 19570802 (Unavailable). PRIORITY: CH 19560810.

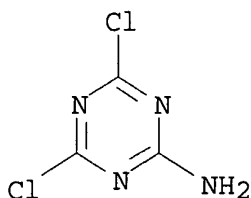
AB Materials can be dyed with H<sub>2</sub>O-sol. metalliferous azo dyes contg. at least one 2,4-di-chloro-s-triazine radical at 20-50.degree. and a pH of .gtoreq.10. Thus, **cotton fabric** is padded to 75% pickup at 20-50.degree. in a soln. contg. 2 parts of the 1:2 Cr-dye complex from 2- 2-hydroxy-5-sulfophenylazo)-6-(2,4-dichloro-s-triazin-6-yl-amino)-1-naphthol-6-sulfonic acid in 100 parts H<sub>2</sub>O and dried. The **fabric** is impregnated With a cold soln. contg. 10 parts NaOH and 300 parts H<sub>2</sub>O, steamed for 60 sec. at 100.degree., rinsed, and soaped for 15 min. in a 0.3% soln. of a nonionic washing agent.

IT 933-20-0, s-Triazine, 2-amino-4,6-dichloro-

(N-deriv., Cr complexes of o,o'-dihydroxy azo dye, dyeing  
cellulose with)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



CC 48 (Textiles)

IT 933-20-0, s-Triazine, 2-amino-4,6-dichloro-  
(N-deriv., Cr complexes of o,o'-dihydroxy azo dye, dyeing  
cellulose with)

L61 ANSWER 9 OF 10 HCA COPYRIGHT 2003 ACS on STN

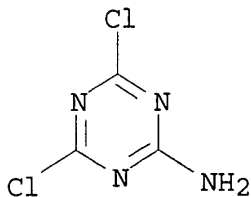
54:36537 Original Reference No. 54:7167b-c Printing of  
cellulose textiles. Clarke, William; Lawman,  
Derek K. (Imperial Chemical Industries Ltd.). GB 824121 19591125,  
Addn. to Brit 797,946 (C.A. 53, 3724e) (Unavailable). APPLICATION:  
GB .

AB In place of the anthraquinonoid dye, a mono- or polyazo dye contg.  
the same groups is used. Thus, in the above example the dye can be  
obtained by condensing equimol. proportions of cyanuric chloride and  
the amino azo compd. obtained by coupling diazotized orthanilic acid  
with 1-(3-aminobenzamido)-8-naphthol-3,6-disulfonic acid.

IT 933-20-0, s-Triazine, 2-amino-4,6-dichloro-  
(dyeing with azo dyes from)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



CC 25 (Dyes and Textiles)

IT Textile printing  
(with aminoazo or polyazo dye pastes)

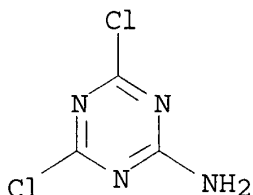
IT 933-20-0, s-Triazine, 2-amino-4,6-dichloro-  
(dyeing with azo dyes from)

L61 ANSWER 10 OF 10 HCA COPYRIGHT 2003 ACS on STN

54:36536 Original Reference No. 54:7166i,7167a-b Printing of

**cellulose textiles.** Clarke, William; Lawman, Derek K. (Imperial Chemical Industries Ltd.). GB 824120 19591125, Addn. to Brit. 798,121 (C.A. 53, 5694f) (Unavailable).  
APPLICATION: GB .

- AB **Cellulose textiles** are locally colored without use of steam by applying an aq. printing paste contg. an anthraquinonoid dye contg. at least 1 ionic solubilizing group and at least 1 amino group which may be substituted with a 1,3,5-triazine radical contg. at least 1 halogen atom attached to a C atom of the triazine ring. Then in a sep. step, an aq. soln. contg. an acid-binding agent is applied, and the **textile** is dried and washed to remove unfixed dye. For example, the printing paste was prepd. by dissolving urea 5 and a dye 5 obtained by condensing equimol. proportions of cyanuric chloride and 1-amino-4-(4-methylamino-3-sulfoanilino)anthraquinone-2-sulfonic acid in H<sub>2</sub>O 30, and adding the soln. to a 4% aq. Na alginate soln. 60 parts.
- IT **933-20-0**, s-Triazine, 2-amino-4,6-dichloro-  
(dyeing with azo dyes from)
- RN 933-20-0 HCA
- CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



- CC 25 (Dyes and Textiles)
- IT **Textile** printing  
(with amino anthraquinonoid dye pastes)
- IT **Textile** printing  
(with aminoazo or polyazo dye pastes)
- IT 108-44-1, m-Toluidine 108-77-0, Cyanuric chloride **933-20-0**  
, s-Triazine, 2-amino-4,6-dichloro- 73356-11-3,  
1,4-Naphthalenedisulfonic acid, 6-amino-  
(dyeing with azo dyes from)

=> d 162 1-13 ti

- L62 ANSWER 1 OF 13 HCA COPYRIGHT 2003 ACS on STN
- TI Herbicidal sulfonyl urea compounds containing alkylthio or propenyloxy radical and their preparations
- L62 ANSWER 2 OF 13 HCA COPYRIGHT 2003 ACS on STN
- TI Chiral perylene bisimide-melamine assemblies: hydrogen bond-directed growth of helically stacked dyes with chiroptical properties

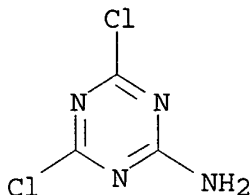
- L62 ANSWER 3 OF 13 HCA COPYRIGHT 2003 ACS on STN  
TI Nucleic acid hybridization assays using immobilized probes with improved sensitivity
- L62 ANSWER 4 OF 13 HCA COPYRIGHT 2003 ACS on STN  
TI Use of heterocyclic nitrogen-containing compounds for reducing moisture loss from plants and increasing crop yield
- L62 ANSWER 5 OF 13 HCA COPYRIGHT 2003 ACS on STN  
TI Covalently attached complex of .alpha.-1-proteinase inhibitor with a water-soluble polymer
- L62 ANSWER 6 OF 13 HCA COPYRIGHT 2003 ACS on STN  
TI Immobilization of potato lipoxygenase by binding with DEAE-**cellulose**
- L62 ANSWER 7 OF 13 HCA COPYRIGHT 2003 ACS on STN  
TI Soluble-high-molecular-weight derivatives of pancreatic trypsin inhibitor. Isolation and properties of the inhibitor bound to carboxymethyl **cellulose** and diethylaminoethyl dextran
- L62 ANSWER 8 OF 13 HCA COPYRIGHT 2003 ACS on STN  
TI Insolubilized enzymes
- L62 ANSWER 9 OF 13 HCA COPYRIGHT 2003 ACS on STN  
TI Herbicidal O-(2-chloro-s-triazin-6-yl)-2,6-dichlorobenzaldoximes
- L62 ANSWER 10 OF 13 HCA COPYRIGHT 2003 ACS on STN  
TI Chemical attachment of chymotrypsin to water-insoluble polymers using 2-amino-4,6-dichloro-s-triazine
- L62 ANSWER 11 OF 13 HCA COPYRIGHT 2003 ACS on STN  
TI Reactive dyes containing halotriazinyl groups
- L62 ANSWER 12 OF 13 HCA COPYRIGHT 2003 ACS on STN  
TI Synthesis of dyes forming chemical linkage with **cellulose**
- L62 ANSWER 13 OF 13 HCA COPYRIGHT 2003 ACS on STN  
TI Labeling of proteins with **cellulose**-reactive dyes

=> d l62 11,12 cbib abs hitstr hitind

- L62 ANSWER 11 OF 13 HCA COPYRIGHT 2003 ACS on STN  
64:68491 Original Reference No. 64:12855g-h,12856a-e Reactive dyes containing halotriazinyl groups. Andrew, Herbert F.; Eckersley, Dennis (Imperial Chemical Industries Ltd.). GB 1019771 19660209, 19 pp. (Unavailable). APPLICATION: GB 19610524.
- GI For diagram(s), see printed CA Issue.
- AB Compds. contg. groups of the general formula I, where R, R1, and R2 are H or alkyl groups, A is an alkylene or arylene group, X and X1 are halogens, and Z is MeO, NH2, or a substituted amino group, are

prepd. and give fast dyeings on cellulose materials. Thus, 21.8 parts di-Na 2-[4-(4,6-dichloro-s-triazin-2-ylamino)-2-acetylaminophenylazo]naphthalene-4,8-disulfonate (II) in 500 parts water is treated with 7.5 parts 2,5-H<sub>2</sub>N(MeNH)C<sub>6</sub>H<sub>3</sub>SO<sub>3</sub>Na (III) in 300 parts water at 45-50.degree., 10% Na<sub>2</sub>CO<sub>3</sub> is added to give pH 7, 130 parts NaCl is added, the mixt. is filtered, and 20.5 parts solid obtained is treated at 5.degree. with 4.8 parts cyanuric chloride (IV) to give a reddish yellow dye (1.7 organically bound Cl atoms/mol.). Similarly prepd. is the reddish yellow reaction product (1.96 organically bound Cl atoms/azo group) of II, MeNHCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, and IV. A mixt. (pH 7) contg. 12.3 parts CuPc[(SO<sub>2</sub>NHC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>-m)-3] (SO<sub>2</sub>NH<sub>2</sub>)(SO<sub>3</sub>H) (Pc = phthalocyanine residue) is treated with 2.3 parts IV, 2.9 parts III is added, and the mixt. is treated at 25.degree. with 2.3 parts 2-methoxy-4,6-dichloro-s-triazine (V) to give a greenish blue dye. Similarly prepd. is the reddish blue reaction product (1.9 Cl atoms/mol.), of di-Na 1-amino-4(4'-methylaminoanilino)-2,3'-anthraquinonedisulfonate, IV, III, and V. V (3.6 parts) is treated with 4.48 parts III, 3.9 parts IV is added, 10% Na<sub>2</sub>CO<sub>3</sub> is added to give pH 7.0, 17.7 parts tetra-Na salt of the Cu complex of 6-amino-2-(4'-phenylazo-5'-methyl-2'-hydroxyphenyl)-1-naphthol-2'',3,5,5''-tetrasulfonate in 200 parts H<sub>2</sub>O added, and the mixt. agitated 2-3 hrs. at 45-50.degree. to give a navy blue dye (1.88 organically bound Cl atoms/2 azo groups). IV (3.9 parts) is treated with NH<sub>3</sub> to give 2-amino-4,6-dichloro-s-triazine (VI); VI is treated with 4.48 parts III to give the Na salt (VII) of 2-chloro-4-amino-6-(4-methylamino-3-sulfoanilino)-s-triazine, and VII is treated with 14.28 parts di-Na salt of 1-(2,5-dichloro-4-sulfophenyl)-3-methyl-4-(3-(dichlorotriazinylamino)-6-sulfophenylazo)-5-pyrazolone to give a yellow dye (1.96 organically bound Cl atoms/azo group). VII (7.05 parts) is treated with 3.9 parts IV, 10% Na<sub>2</sub>CO<sub>3</sub> is added to give pH 6.5, 4.2 parts 2,4-(H<sub>2</sub>N)2C<sub>6</sub>H<sub>3</sub>SO<sub>3</sub>H is added, the mixt. is agitated at 30-5.degree., and the product is diazotized and coupled with 9.34 parts 8,3,6,1-BzNH(NaO<sub>3</sub>S)2C<sub>10</sub>H<sub>4</sub>OH to give a bluish red dye (1.91 organically bound Cl atoms/mol.). V (3.6 parts) is treated with 19.09 parts tetra-Na salt of the condensation product of IV, 8,3,6,2,1-H<sub>2</sub>N(HO<sub>3</sub>S)2(2,1-HO<sub>3</sub>SC<sub>10</sub>H<sub>6</sub>N:N)C<sub>10</sub>H<sub>3</sub>OH and III to give a bluish red dye (2.1 organically bound Cl atoms/mol.). IV (3.9 parts) is treated with 7.26 parts 8,3,6,1-HO(NaO<sub>3</sub>S)2C<sub>10</sub>H<sub>4</sub>NH<sub>2</sub>, 10% Na<sub>2</sub>CO<sub>3</sub> is added to give pH 6.5, 4.48 parts III in 50 parts water is added, the mixt. is agitated 1 hr. at 35-41.degree., and 10% Na<sub>2</sub>CO<sub>3</sub> is added to give pH 7.0. The mixt. is treated with 3.32 parts VI, agitated 2 hrs. at 35-41.degree. (pH 7.0), cooled to 5.degree., and treated, at pH 7.0-8.0, with 2.8 parts PhN<sub>2</sub><sup>+</sup> Cl<sup>-</sup> to give a red dye (1.78 organically bound Cl atoms/mol.).

IT 933-20-0, s-Triazine, 2-amino-4,6-dichloro-  
 (reactive dyes from amines, aminosulfonic acids and)  
 RN 933-20-0 HCA  
 CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



IC C09B  
CC 46 (Dyes)  
IT Dyes

(azo, reactive, chloro-s-triazine derivs., cotton)  
IT 933-20-0, s-Triazine, 2-amino-4,6-dichloro-  
(reactive dyes from amines, aminosulfonic acids and)

L62 ANSWER 12 OF 13 HCA COPYRIGHT 2003 ACS on STN

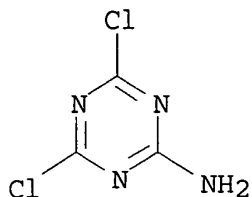
53:127881 Original Reference No. 53:22958g-i Synthesis of dyes forming chemical linkage with **cellulose**. Manabe, Osamu; Kitahara, Shinya; Hiyama, Hachiro (Osaka City Ind. Research Inst.). Kogyo Kagaku Zasshi, 61, 89-92 (Unavailable) 1958. CODEN: KGKZA7. ISSN: 0368-5462.

AB Dyes contg. the 2,4-dichloro-1,3,5-triazinyl radical of red, yellow, orange, and orange-brown colors, resp., were prepd. Thus, the coupling of diazotized metanilic acid (0.05 mole) with 0.05 mole H acid in the 2-position in the presence of 15 g. Na2CO3 in ice by stirring for 3 hrs. gave 28 g. of a monoazo compd., 5.5 g. of which was dissolved in aq. NaHCO3 soln. and treated with 1.85 g. cyanuric chloride (1:1 molar relationship) in acetone at 2-5.degree. for 1-1.5 hrs. to yield 6 g. of a red dye (I). Similarly, the monoazo dye, obtained from diazotized sulfanilic acid coupled with .omicronmicron.-anisidine in the para position, treated with cyanuric chloride gave a yellow dye (II). An orange dye (III) was prepd. from diazotized m-nitroaniline coupled with G acid in the 1-position and the product reduced and treated with cyanuric chloride; an orange-brown dye (IV) was prepd. from diazotized H acid coupled with 1-naphthylamine-8-sulfonic acid in the 4-position and the product treated with cyanuric chloride. The fastness to washing and light of I-IV for **cotton** were very good. The dichlorotriazinyl radical contained in these dyes are believed to combine chemically with the hydroxyl group of **cellulose** mols.

IT 933-20-0, s-Triazine, 2-amino-4,6-dichloro-  
(derivs., as azo dyes reactive with **cellulose**)

RN 933-20-0 HCA

CN 1,3,5-Triazin-2-amine, 4,6-dichloro- (9CI) (CA INDEX NAME)



CC 25 (Dyes and Textiles Chemistry)

IT Dyes

(azo, contg. 4,6-dichloro-s-triazin-2-yl group, reactive with cellulose)

IT 933-20-0, s-Triazine, 2-amino-4,6-dichloro-

(derivs., as azo dyes reactive with cellulose)